

Simplicity



OWNER'S MANUAL

SERF 535 TRACTOR

**MFG. NO. 776 INCLUDES MFG. NO. 647 MANUAL START SERF TRACTOR AND
MFG. NO. 599 28" ROTARY MOWER
MFG. NO. 777 INCLUDES MFG. NO. 648 ELEC. START SERF TRACTOR AND
MFG. NO. 599 28" ROTARY MOWER**

**OPTIONAL ATTACHMENTS
594 LIFT LEVER**

SIMPlicity MANUFACTURING COMPANY, INC.

1624

**SER. FORM - OP6
LITHO IN U.S.A.**

CONGRATULATIONS!

... on your choice of **SIMPLICITY** equipment.

This great new product is engineered with imagination and built with integrity to assure you maximum service and performance for years to come. To completely understand the operation of your equipment and to take full advantage of its many fine built-in features, study this instruction manual thoroughly before operating the machine. The little time you spend reading now will repay you many times over in the time you save and the satisfaction you gain in using your equipment properly and safely.

SAFETY FIRST

PROTECT YOURSELF AND OTHERS BY FOLLOWING THESE SAFETY RULES

- * **ALWAYS** inspect the area to be worked — note all grades, obstructions, wet spots and other potential hazards and pick up all foreign objects before mowing.
- * **ALWAYS** keep children and pets a good, safe distance away.
- * **ALWAYS** know your controls and how to stop quickly in an emergency — read the owner's manual thoroughly.
- * **NEVER** allow anyone to operate the equipment without full instruction and knowledge of safe operating procedures.
- * **NEVER** handle gasoline carelessly. Use an approved container and fill the tank out of doors. Wipe up spilled gasoline. Do not smoke while fueling the engine.
- * **NEVER** add gasoline to a running engine. Stop engine and allow it to cool a few minutes before adding fuel. Replace filler cap securely.
- * **NEVER** operate equipment unless all guards and shields are in place.
- * **ALWAYS** keep hands, feet and clothing away from power driven parts.
- * **ALWAYS** disengage the power take off drives, stop the engine, and remove the key (on electric start models) before leaving the machine even if only for a moment.
- * **ALWAYS** stop the engine before servicing or adjusting machine or equipment. Remove the spark plug wire on walk behind mowers.
- * **ALWAYS** stop the engine and inspect for damage immediately after striking an obstruction or foreign object. Repair damage before restarting.
- * **NEVER** overspeed the engine or alter governor settings. Excessive speed is always unsafe and shortens engine life.
- * **ALWAYS** properly maintain the equipment. Check all fasteners, guards and parts.
- * Mow across slopes with walk behind units and up and down them with riding units. Do not use power mowers on slopes greater than 40% grade. (Four feet vertically for each 10 feet horizontally.)
- * **ALWAYS** stop the engine on walk behind units or disengage the blade drive and raise the mower on riding units before crossing gravel drives.
- * Do not operate the engine where carbon monoxide can collect.



**BUILT IN SAFETY FEATURES CAN BE
EFFECTIVE ONLY IF PROPERLY
MAINTAINED AND UTILIZED.**

PROTECT YOURSELF AND OTHERS

In addition to the basic safety rules appearing on the inside front cover, follow these safety tips when using your tractor and its attachments.

- If your equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is usually a warning of trouble.
- Stay alert for holes in terrain and other hidden hazards.
- Look to be sure children are not behind you before backing up.
- Take precautions such as disengaging the power take-off, lowering attachments, shifting into neutral, setting parking brake, stopping engine and removing key when leaving vehicle unattended.
- Check all nuts, bolts and screws, especially the blade and engine mounting bolts, for proper tightness at frequent intervals to be sure the equipment is in safe working condition.
- Never store equipment with gasoline in the tank inside of a building where fumes may reach an open flame or spark. Allow engine to cool before storing in any enclosure.
- To reduce fire hazard keep engine free of grass, leaves or excessive grease.
- Watch out for traffic when crossing or near roadways.
- Use care when pulling loads or using heavy equipment. Use only approved drawbar hitch points. Limit loads to those you can safely control. Don't turn too sharp and use care when backing. Use counterweights or wheel weights when suggested in the owners' manual.

- When using any attachments, never direct discharge of material toward bystanders or allow anyone near the tractor while in operation.
- Always stop the engine when removing grass catcher or unclogging the chute.
- Always remove the ignition key when inspecting, cleaning, repairing or adjusting the tractor or attachments.
- Do not stop or start suddenly when going uphill or downhill. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control.
- Never allow children or young teenagers to operate the tractor or adults to operate it without proper instruction.
- Do not carry passengers. Always keep children and pets a safe distance away.
- Do not operate equipment when barefoot or wearing open sandals. Always wear substantial footwear.
- Disengage all clutches and shift into neutral before starting the engine.
- Mow only in daylight or in good artificial light.
- Disengage power to attachments when transporting or not in use.
- Be especially careful when operating on wet or slippery surfaces.
- Keep hands and feet away from rotating parts. Stay clear of discharge opening at all times.

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Congratulations on your purchase of the fine Serf tractor. We at Simplicity know you bought this machine to make your lawn and garden work easier. You bought the right machine to do it. So that you can get the very most from your purchase, we would consider it a personal favor if you would take time to study this manual before using your tractor and its attachments. It will increase the chance of adding you to our long list of satisfied customers. Also, before allowing others to operate your tractor, be sure they read and understand the safety precautions and operation section of this manual.

For your own safety and that of your family and friends, periodically review the safety tips found on the inside front cover and page one of this manual. Before we learn how to operate the Serf, let's take a look at some of its exciting features.

SMOOTH OPERATING COMBINED CLUTCH

AND BRAKE PEDAL. Start and stop with easy rocker action and no wheel skid. Improved touch-o-matic clutch converts any transmission speed from zero to maximum without shifting for inching or turning.

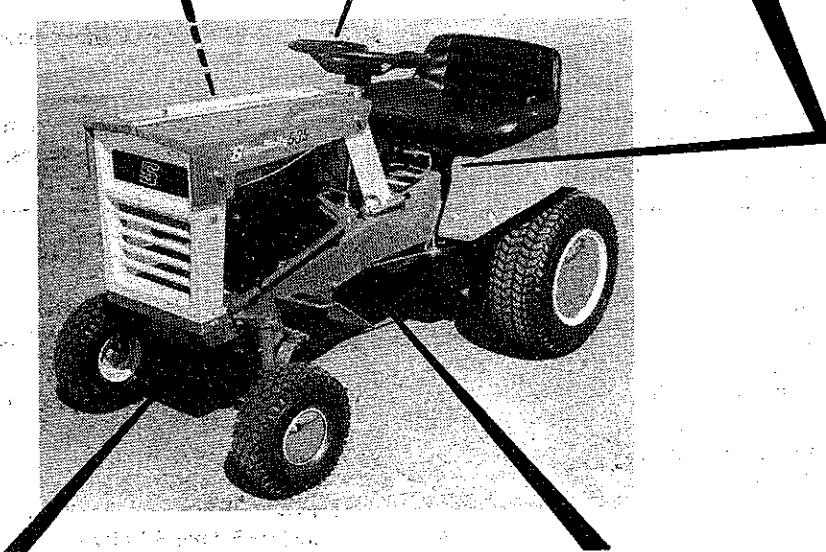
BRIGGS & STRATTON 5 H.P.

KOOL-BORE ENGINE with compression-relieved Easy-Spin manual starting or key switch electric starting. Vertical crankshaft to allow protected drive system, low center of gravity and maximum power to implements.

EASY STEERING. One to one ratio gear and sector steering of true geometry design. The front wheels follow different arcs when turning, giving improved steering and minimizing wheel marks on soft lawns. The short turning radius gives excellent maneuverability - turning time.

EASY TO REACH HAND OPERATED CONTROLS

Gear shift, throttle and choke lever are conveniently located at the instrument panel. The power take-off clutch lever and implement lift lever are located for natural, easy operation. Easy to reach parking brake is simple to use and dependable.



QUICK SWITCHING ATTACHMENTS

Simplicity engineered implements are designed to be simple to attach and remove as well as operate. The broadest variety of front, center and rear mounted implements offered. See Attachment Book for complete information.

RUGGED CHANNEL FRAME CONSTRUCTION

FOR DURABILITY AND LONG LIFE; electrically welded, heavy gauge steel. Short wheelbase, large low pressure tires. New bead lock rims keep tires sealed at low pressures for a very soft ride.

DEPENDABLE, ALL GEAR TRANSMISSION.

Fully enclosed, sealed and lubricated. Limited slip differential reduces wheel slippage on slippery or sloping surfaces, yet allows each wheel to rotate at required speed while turning.

(HUB CAPS OPTIONAL)

OPERATION

CONTROLS AND HOW TO USE THEM

Picture yourself seated on your Serf tractor. Before starting the engine, let's learn how to use each of these safe, easy to reach controls. (The numbers on the Figures 1 to 5 correspond to the paragraph numbers below.)

1. Ignition Switch (Electric Start Models): Be sure transmission is in neutral before starting engine. When turned clockwise to the first position the ignition is turned on. Turn past this position to actuate the starter. Release the key as soon as the engine starts. Return the key to the vertical position to stop the engine.

2. Engine Speed Control Lever. The engine speed control should be moved up toward FAST to increase engine speed and down toward SLOW to decrease engine speed. Move all the way to the upper position to choke the engine for starting.

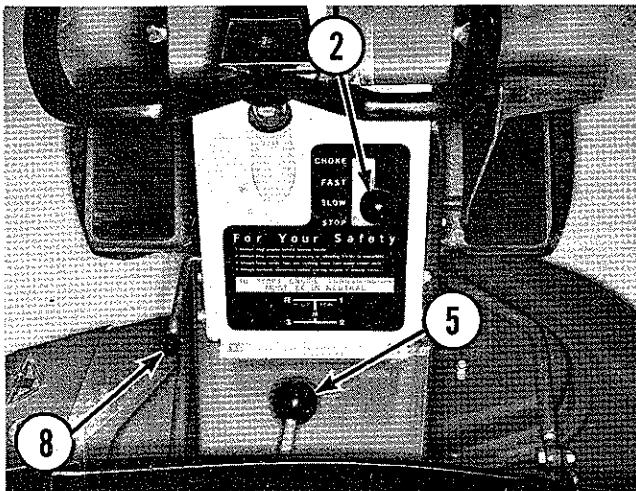


FIGURE 1

3. Fuel Filler Cap: Turn the cap counter-clockwise to remove for refueling.

4. Clutch and Brake Pedal: Depressing the pedal will first disengage the tractor drive clutch. As you continue to depress the pedal the brakes will be applied to stop the tractor.

5. Gear Shift Lever: The gear shift lever is used to select the desired transmission gear speed and direction. There are three forward and one reverse positions.

| | | | |
|--------|---------|---------|---------|
| First | 0.9 MPH | Third | 3.5 MPH |
| Second | 2.3 MPH | Reverse | 3.5 MPH |

The diagram printed on the panel shows the location of each position. To shift the transmission into first or reverse from the neutral position, it is necessary to pull UP on the shift lever to overcome the force of the shift fork spring. After you feel the lever pass the spring, push the shift lever to the left or right and snap the transmission into reverse or first gear as you desire. To shift into second

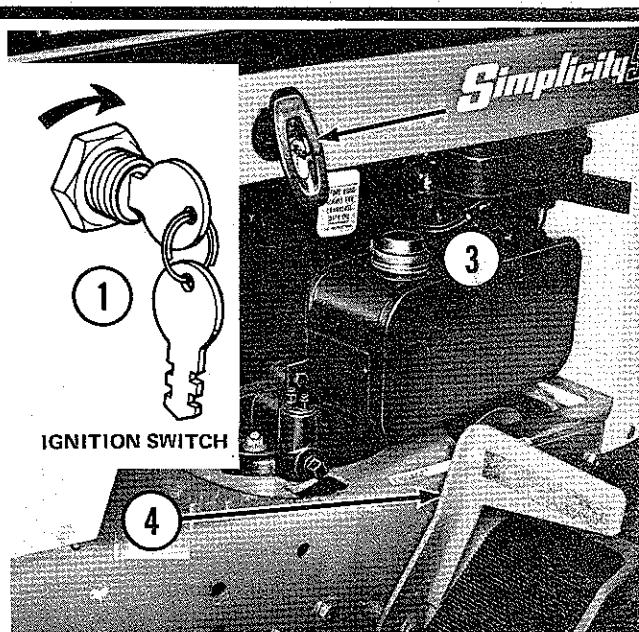


FIGURE 2

or third, push DOWN on the shift lever until you feel it overcome the spring, then push it to the left or right until it snaps into the desired gear. Do not attempt to move the shift lever unless the foot pedal (item 4) is depressed and the tractor is stopped.

6. Parking Brake Lock: Depress the foot pedal completely and hold it while the parking brake lock is turned in a clockwise direction until tight. To release the parking brake, turn the lever in a counter-clockwise direction until the brake releases.

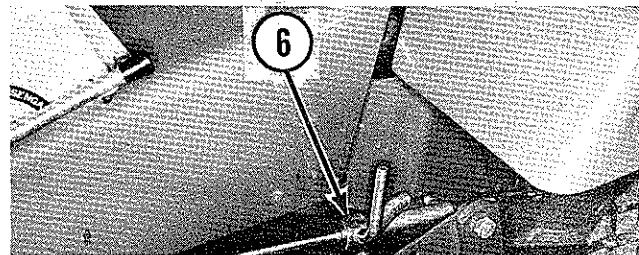


FIGURE 3

7. Trickle Charger: (Electric Start Only): Connect the trickle charger to the receptacle on the tractor and plug it into a 110 Volt, 60 Cycle A.C. outlet for 12 to 24 hours

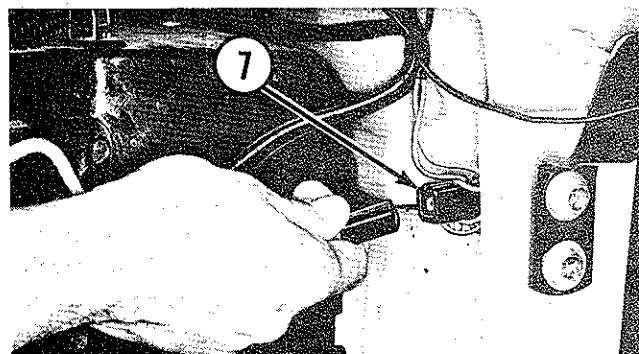


FIGURE 4

about once a week. The charger may be used more often if necessary to keep the battery charged so it will turn the engine easily. Disconnect the charger before starting the engine. When the tractor is not in use, increased life will result if the charger is connected for 12-24 hours every 2 or 3 weeks to keep the battery fully charged. (Figure 4).

8. Power Take-Off Clutch: The power take-off clutch controls power to attachments such as a mower or snow blower which are driven by the engine pulley. The clutch operates by engaging or disengaging the front pulleys with the implement drive belt to increase or decrease tension. To engage the drive, slowly push the lever forward and down all the way to the engaged position. To disengage the power take-off drive, pull the lever completely to the rear. The engine should be running at three fourths to full throttle when the power take-off is engaged to absorb the initial effect of the added load. Tractor ground speed can be regulated with the transmission and the foot pedal.

9. Lift Lever: (Optional) The lift lever is used for lifting the rotary mower or other implements out of the operating position so they can be transported. The implement is connected to the lift lever either with a lift chain or a lift link to the front or rear of the tractor. The thumb button on top of the handle is pressed to disengage the latch from the quadrant so the lever can be moved forward or rearward as required and locked in position. The mower may be held in the raised position with the hook provided if the tractor is not equipped with the lift lever. See Figure 5.

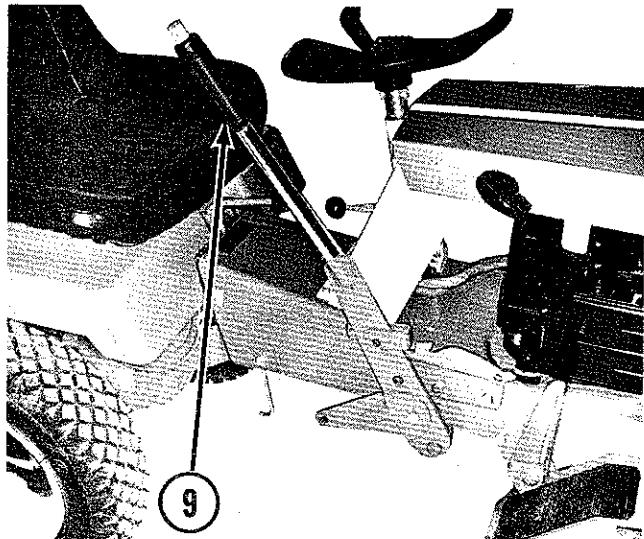


FIGURE 5

BEFORE STARTING

Though your Simplicity dealer may have performed the before starting checks listed below, we suggest you personally check each one so that you will become familiar with them and also to insure that your tractor is ready to go the first time you use it.

1. Tire Inflation: The tractor is shipped with all tires inflated to 25 PSI. Before operating, reduce pressure in all

tires. The front tires 12 to 15 PSI and rear 6 to 8 PSI.

2. Engine Oil: Be sure the oil in the engine crankcase is at the proper level. See your Briggs and Stratton manual and page 9 of this manual. (Figure 6.)

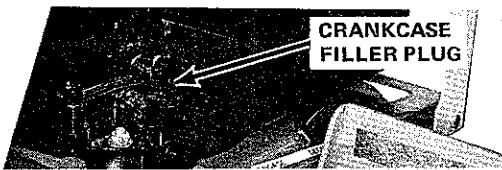


FIGURE 6

3. Transmission Oil: Check the transmission to insure it is filled with oil to the proper level. See page 9 of this manual for type and weight of oil to use. (Figure 7).

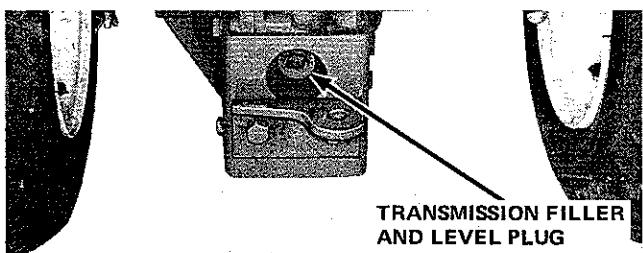


FIGURE 7

4. Fuel Supply: Check the fuel supply. Fill tank completely with clean, fresh, leaded or non-leaded "Regular" grade automotive gasoline. (DO NOT MIX OIL WITH GASOLINE). Store gasoline in small quantities as prolonged storage produces gum. (See page 3 item 3 of this manual. (Figure 8).



FIGURE 8

CAUTION

GASOLINE IS HIGHLY INFLAMMABLE. AVOID OVERFILLING AND WIPE UP ANY SPILLED FUEL. ALLOW NO OPEN FLAME, SMOKING OR MATCHES NEAR THE AREA WHEN REFUELING.

5. Battery (Electric Start Models): Be sure the battery is filled to the proper level with electrolyte and the vent holes on each cap are open. See page 3. Charge as required before attempting to start. See page 3, Item 7.

6. Lubrication: Lubricate all grease fittings and oil lubrication points as shown in the "Maintenance" section of this manual on page 9.

7. Attachments: Read and become familiar with the ATTACHMENTS MANUAL which refers to attachments

you will be using with your tractor. **IMPORTANT:** If you are using a rotary mower with your tractor, the front to rear height adjustment must be checked. See the Rotary Mower section of the Attachments Manual.

STARTING THE ENGINE

1. Insure that the power take-off is disengaged by moving the lever to the rear and down. (Figure 9).
2. Place the transmission shift lever in the neutral position.

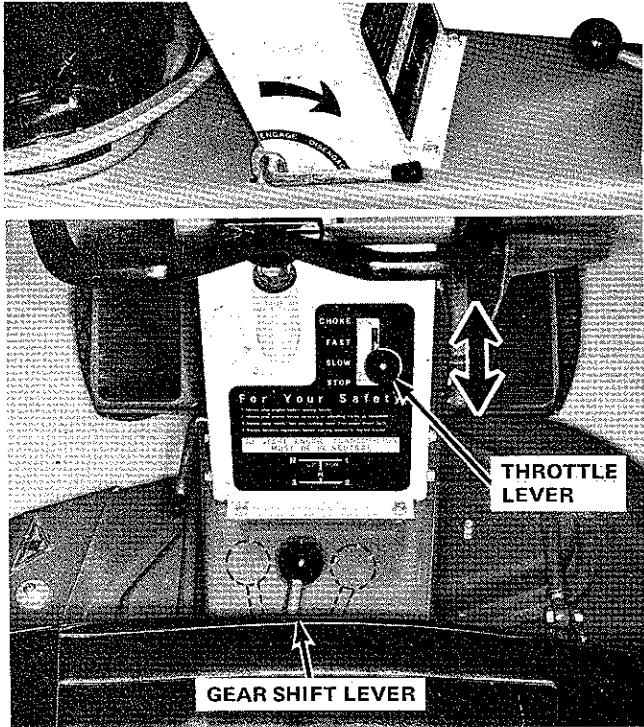


FIGURE 9

3. Depress the clutch-brake pedal all the way and hold it down. (See Figure 10).
4. Move the engine speed control lever all the way to the choke position.

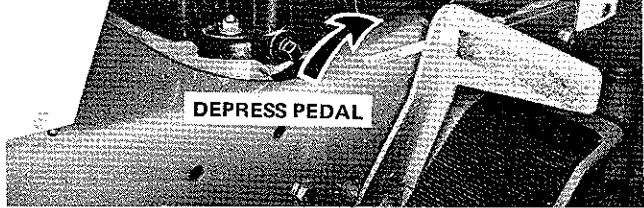


FIGURE 10

5. **MANUAL START MODELS:** Grasp the recoil starter handle firmly in your right hand and pull sharply straight out. **DO NOT RELEASE THE STARTER HANDLE WITH THE ROPE EXTENDED.** Return the handle to the hood by hand. (See Figure 11).

ELECTRIC START MODELS: Turn the ignition key clockwise and hold it until the engine starts, then release



FIGURE 11

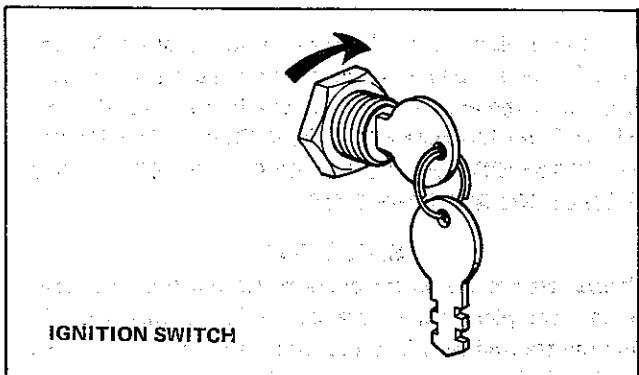


FIGURE 12

it. If the battery does not have enough charge to crank the engine, you may start the engine using the manual recoil starter. Leave the switch in the "ON" position and start the tractor as you would a manual start model.

6. If the engine starts promptly, slowly move the throttle lever to "FAST" as it warms up. If the engine fails to start on the first or second try, move the throttle lever from "CHOKE" to "FAST" to avoid flooding and try starting again. If the engine is flooded, move the throttle lever to "STOP" and continue cranking to get rid of excess fuel.

STOPPING THE ENGINE

1. Move the throttle lever to the slow position and allow the engine to idle for about a minute if the tractor has been operated under full load, to gradually reduce engine temperature. Stopping a hot engine too suddenly can cause damage to engine parts.
2. (Electric Start Models) Turn the ignition key counter-clockwise to the vertical position and remove the key to prevent unauthorized use of the tractor.

(Manual Start Models) Move the speed control lever to the STOP position.

ENGINE SPEED AND TRANSMISSION GEAR SELECTION

Tractor ground speed can be determined by placing the transmission in any one of three forward speeds or reverse by adjusting the engine speed control or by inching (slipping) the clutch. When moving the tractor from place to place, be sure any attachments are in the raised (travel)

position and the power take-off disengaged. You may find it appropriate to use many combinations of transmission gear and engine speed selections when transporting the tractor. The following guidelines are given:

USE FIRST GEAR: When traveling over rough or uneven ground or on hilly terrain.

USE SECOND GEAR: On slight slopes where the ground is fairly level and even.

USE THIRD GEAR: When traveling a distance on level ground or pavement which is smooth and even.

Place the engine control lever one third to one half open when beginning travel. After starting the tractor in motion, adjust the engine speed for the desired rate of travel. SEE THE ATTACHMENTS BOOK FOR RECOMMENDED TRANSMISSION GEAR AND ENGINE SPEED WHEN USING ATTACHMENTS.

SHIFTING

Always depress the clutch-brake pedal and bring the tractor to a complete stop before attempting to shift gears. To shift the transmission into first or reverse from the neutral position it is necessary to pull UP on the shift lever to overcome the force of the shift fork spring. After you feel the lever pass the spring, push the shift lever to the left or right and snap the transmission into reverse or first gear as you desire. To shift into second or third, push DOWN on the shift lever until you feel it overcome the spring, then push it to the left or right until it snaps into the desired gear. If the gears do not engage easily, it may be helpful to let the clutch out for an instant and then depress it again to rotate the gears slightly.

STOPPING

1. Slowly depress the clutch-brake pedal until the tractor stops.
2. Place the tractor in neutral and set the parking brake.
3. Disengage the power take-off clutch and lower any attachments to the ground.
4. If the engine has been running under full load, allow the engine to idle about a minute before stopping.
5. On electric start models, remove the key to prevent unauthorized use of the tractor.

TROUBLE SHOOTING

For instruction to overcome the following problems see "Adjustments", "Maintenance" and "Service" sections of this book.

IF THE ENGINE FAILS TO TURN OVER - check the following:

1. The shift lever must be in Neutral
2. The battery cable clamps must be clean and tight. (Electric Start Models)
3. The power take-off must be disengaged.
4. The battery may not be charged (Electric Start Models) See page 3, Item 7.

IF THE ENGINE TURNS, BUT WILL NOT START, check the following:

1. Wiring connection at the switch, regulator, and generator must be clean and tight. (Electric Start Only)
2. The engine speed control lever must be in the choke position.
3. The spark plug cable must be tightly connected.
4. The fuel tank must have a good regular gasoline in it.
5. The power take-off must be "Neutral".

IF BELT SLIPPAGE OCCURS, check the following:

1. Belts may be stretched or excessively worn.
2. Pulleys may be greasy or oily.
3. Insufficient belt tension due to a broken or worn tension spring.

IF A BELT BREAKS, check the following:

1. Look for sharp edges or rough spots on the pulleys.
2. Pulleys may be misaligned.

IF HANDLING IS DIFFICULT, check the following:

1. Controls or drive systems may be out of adjustment.
2. Tires may be under-inflated, or not of equal pressure. Inflate tires to - REAR 6-8 PSI FRONT 12-15 PSI.
3. Wheels spinning on slopes. Wet grass is very slippery try to work in the late afternoon after it has dried. Wheel weights may be added to provide additional traction. See Accessories section of this manual.

ADJUSTMENTS

Raising Tractor to a Vertical Position:

In order to make some of the adjustments which follow and to perform some of the maintenance operations more easily you may wish to raise the tractor to a vertical position. Proceed as follows:

1. Remove all attachments from the tractor.
2. The fuel tank must contain less than $\frac{1}{4}$ " of fuel so it will not spill out when the tractor is lifted. Operate the tractor until fuel is at a safe level.
3. Disconnect the battery cables (the negative "ground" cable first) and carefully remove the battery. (Electric Start Models)
4. Place a block approximately five inches high behind the tractor as shown, so the back of the seat will rest against it when the tractor is in the raised position. See Figure 13.
5. Place the transmission shift lever in FIRST gear to prevent the rear wheels from turning.
6. Grasp the front of the tractor and raise it until the back of the seat rests on the block placed behind the tractor. It is possible for one man to raise the tractor, but it is easier and safer for two men to do it.

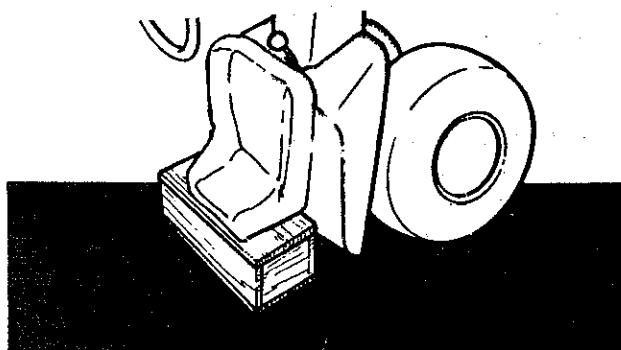
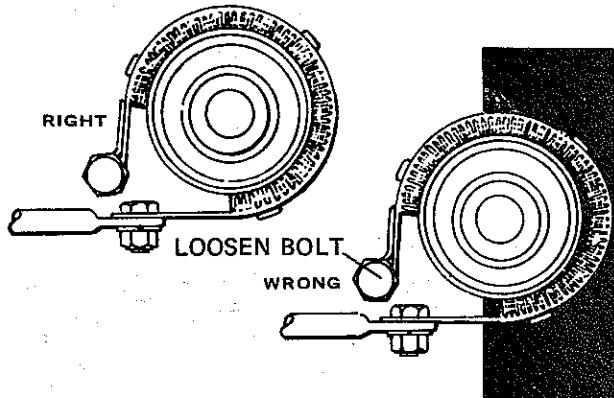


FIGURE 13

Clutch and Brake Rod:

The correct adjustment of the clutch and brake pedal linkage is vital to smooth machine motion and braking. These adjustments also determine the effectiveness of the anti-rollback feature. You may wish to raise the tractor to the vertical position. BE SURE TO DRAIN FUEL IF NECESSARY, AND REMOVE BATTERY BEFORE TILTING THE TRACTOR. Make the adjustments as follows:

1. Depress the foot pedal and check the contact of the brake band with the brake drum. The band must conform fully to the curvature of the drum. If it does not, loosen the bolt as shown and align the band with the drum. Tight-



en the bolt. (See Illustration above.)

2. With the foot pedal released (up), secure the brake rod set collar against the tapered coil spring. Be sure to position the collar as shown in Figure 14 so that the spring is NOT compressed. Depress the foot pedal all the way down. It should stop two and one-half inches from the

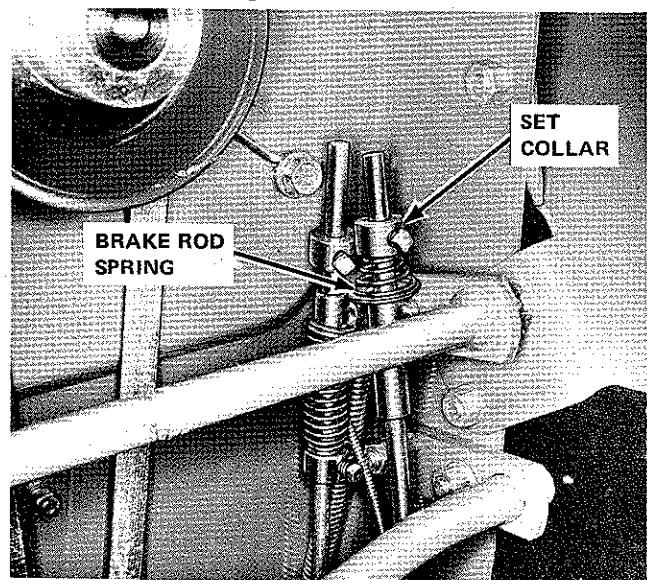


FIGURE 14

foot rest edge as shown in Figure 15. Re-adjust the set collar if necessary to obtain the two and one-half inch distance.

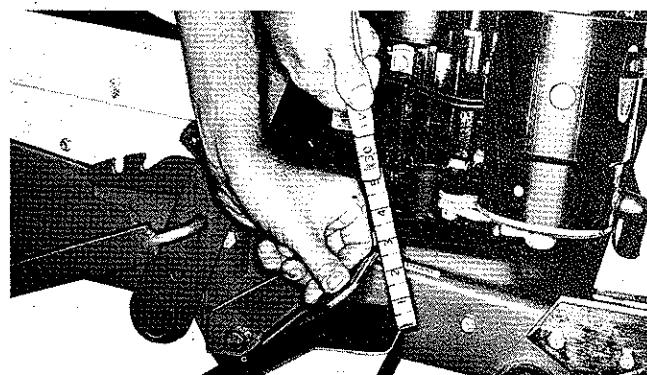


FIGURE 15

3. With the foot pedal released (up so the clutch idler pulley is pressed firmly against the belt (Figure 16), the distance between the clutch rod set collar and the end of the rod guide should be five-eighths (5/8) inch as shown in Figure 17.

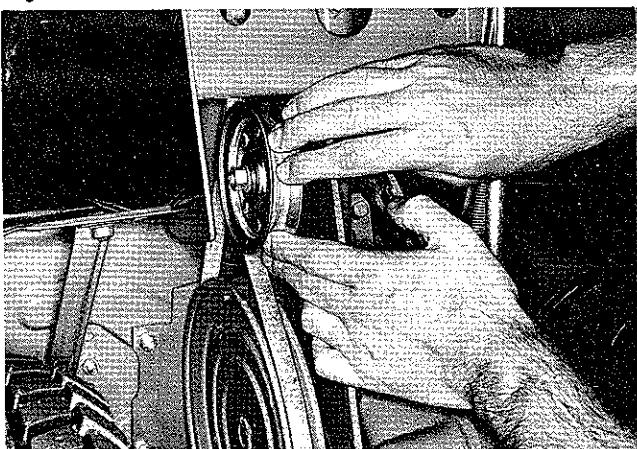


FIGURE 16

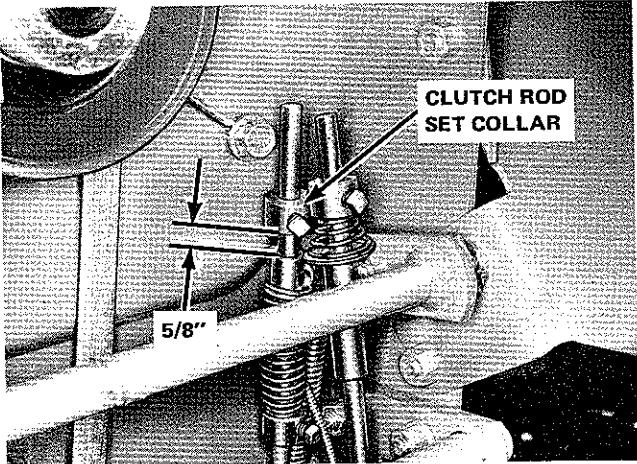


FIGURE 17

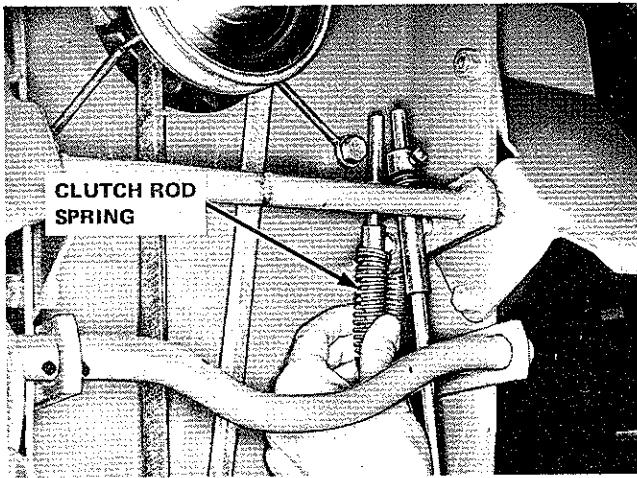
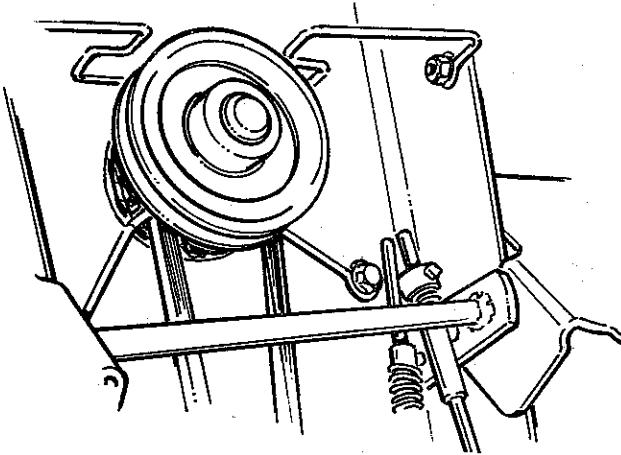


FIGURE 18

4. With the set collar adjusted correctly on the clutch rod depress the foot pedal all the way and adjust the set collar at the rear of the spring so that the clutch rod spring is just free to rotate on the rod. (See Figure 18).

Belt Stops:
If the main drive belt will not stop when the clutch is depressed, the belt stops may need adjusting.

The belt stops on the Serf tractor should be adjusted so there is one-sixteenth to one-eighth inch between the belt stop and the belt when the belt is tight (clutch engaged.) To adjust a belt stop, loosen the bolt holding it, move the belt stop to the proper position and re-tighten the bolt. Check the adjustment after the bolt has been tightened. (See Illustration below)



Seat:

The seat may be adjusted from front to rear as desired by re-positioning the seat in any of the three sets of holes in the seat support. Simply remove the nuts and lock washers from the lower seat pan mounting bolts and re-position the seat. Re-tighten the nuts securely.

Power Take-Off Rod Guide Adjustment:

Should an attachment fail to drive properly, the power take-off clutch may need adjusting. The power take-off clutch is normally in proper adjustment when there is one fourth inch clearance between the set collar and the end of the bracket when engaged. If more tension is needed or readjustment is necessary, disengage the power take-off lever, loosen the collar set screw and slide the collar back on the rod slightly. Engage the lever and check the belt tension. Only enough tension to drive the implement being used is necessary. Excess tension may cause premature failure of belts and pulley bearings. (See Below).

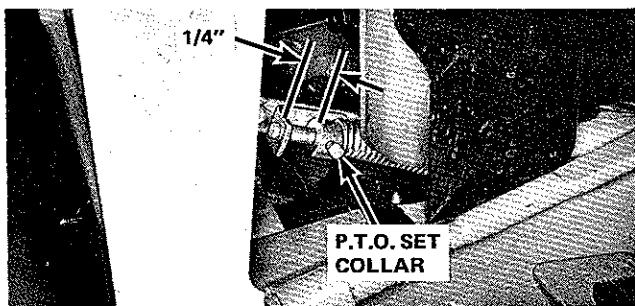


FIGURE 19

MAINTENANCE

Regular maintenance of your Simplicity tractor will greatly increase its useful life and reduce repair costs. See your Briggs and Stratton manual for engine maintenance in addition to the steps listed here.

Every Five Hours

Before starting the engine and at least once every five hours check the oil level in the engine crankcase. Turn the inspection—fill plug counter clockwise to remove. Maintain the oil at the full level. (See Figure 20).

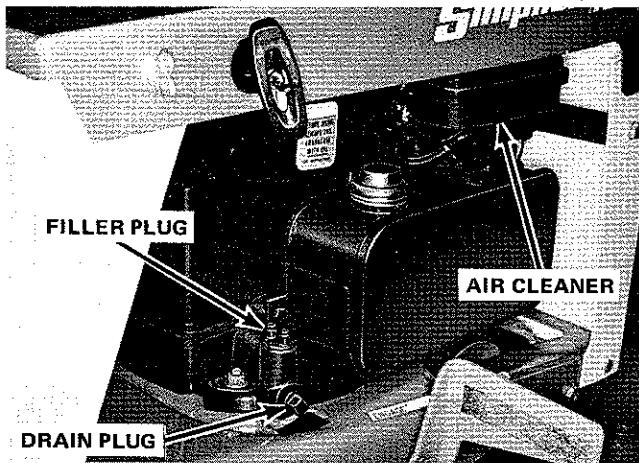


FIGURE 20

Every 25 Hours

Every 25 hours or oftener under extremely dusty conditions: All attachments should be removed from the tractor and the following maintenance procedures performed:

1. Clean the Cooling System: In order to clean the engine cooling system, it will be necessary to remove the four thumb screws holding the hood and remove the hood from the tractor, lifting up and forward to clear the steering wheel. Clean all grass, chaff and dirt from the engine fins and shrouds.

2. Change Engine Oil: Drain the crankcase when the engine is warm. Remove the drain pipe cap until all oil is drained, then replace cap and tighten securely. Refill the crankcase with a high quality detergent oil classified MS. Summer (above 40°F.) use SAE 30. Winter (below 40°F.) use SAE 5W-20 or SAE 10W. IT IS VERY IMPORTANT THAT THE ENGINE IS SERVICED ACCORDING TO THE SEASON AND TEMPERATURE IT WILL BE USED IN.

3. Clean the Air Cleaner: Turn the screw on the air cleaner cover counter clockwise to loosen. Remove cover and foam element. Wash the foam air cleaner element in Kerosene or liquid detergent, squeezing several times and dry it thoroughly. Saturate it with engine oil, squeeze several times to distribute the oil and remove excess and reinstall. Make certain the lips of the filter are in position when installing.

4. General Lubrication: The five grease fittings on your tractor should be greased with a lithium base automotive type grease. Remove all dirt, grit and paint from the fitting before greasing. A few drops of engine oil should be applied to the points indicated. Do not allow oil to get on belts or pulleys. (See Figures 21, 22 & 23).

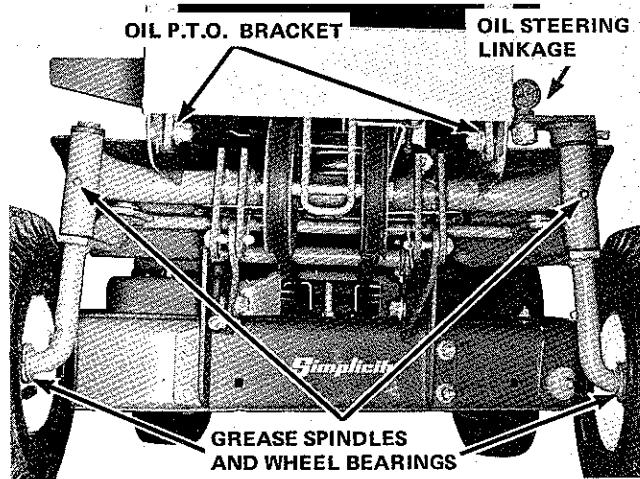


FIGURE 21

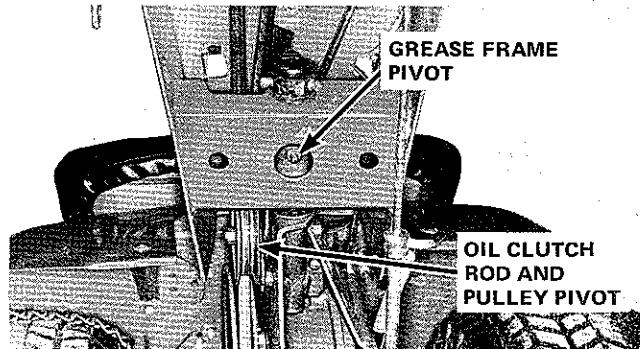


FIGURE 22

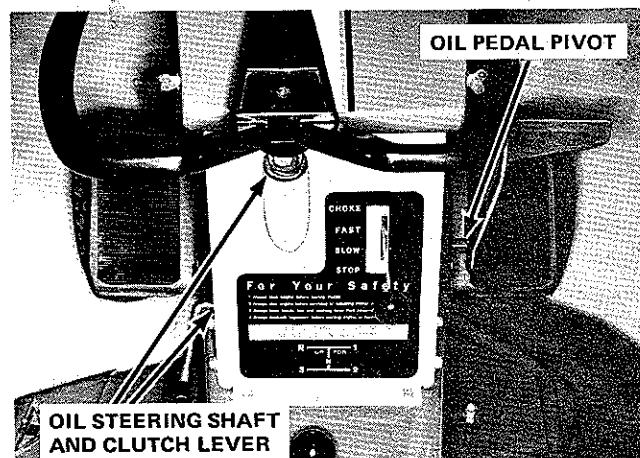


FIGURE 23

5. Check the Transmission Oil Level by removing the filler and level plug at the rear of the transmission. Allow the tractor to set for about 10 minutes after operation before checking. Oil should be level with the bottom of the filler and level hole. If necessary, add SAE 90 wt. transmission

oil. Re-install the plug securely. It is normally not necessary, but if you wish to drain oil from the transmission, the drain plug is located on the lower right side of the transmission housing. (See Figure 24).

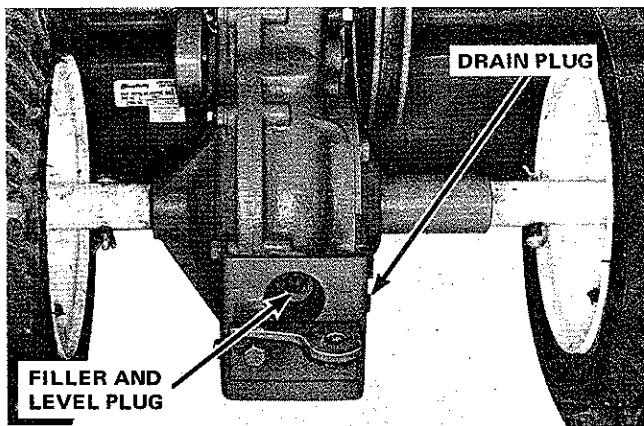


FIGURE 24

6. Check the Battery Water Level to insure it is maintained at the battery fill line approximately one-fourth inch above the plates. If water is needed, add distilled water just before charging to mix the solution. **DO NOT OVER FILL THE BATTERY.** (See Figure 25).

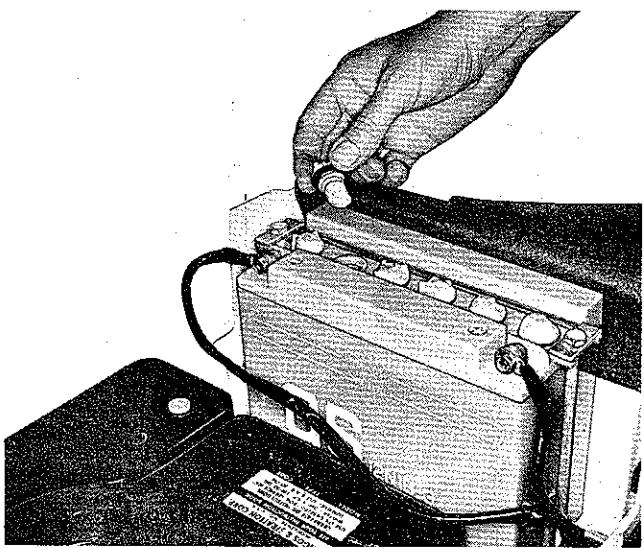


FIGURE 25

Every 100 Hours or Once a Year

1. Remove the spark plug, clean or replace and set the gap at $.030"$. DO NOT SAND BLAST PLUGS, AS THE ABRASIVE PARTICLES LEFT ON THE PLUG MAY DAMAGE THE ENGINE. Plugs may be cleaned by scraping or wire brushing and washing in a solvent or gasoline. (Figure 26)

2. Remove the battery cables. **ALWAYS REMOVE THE NEGATIVE "GROUND" CABLE FIRST AND REPLACE IT LAST.** Clean the battery with soap and water to remove all dirt, oil and corrosion from battery surface. DO NOT ALLOW FOREIGN MATERIAL OR CLEANING SOLUTION TO GET INSIDE THE BATTERY. Clean the terminals and cable clamps with a wire brush. Replace and

tighten snugly. After tightening, coat the terminals and clamps liberally with grease or vaseline to inhibit corrosion.

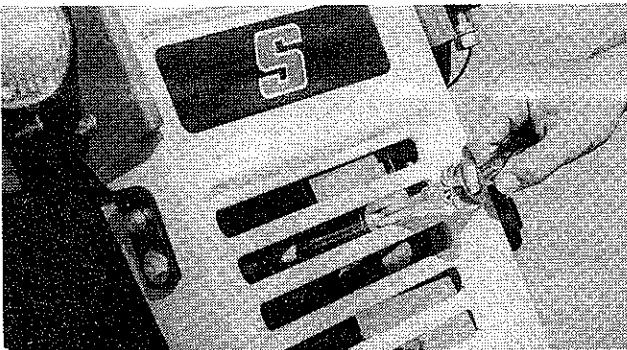


FIGURE 26

SERVICE

Battery Replacement (Electric Start Models): A dead battery or one too weak to start the engine may not necessarily mean the battery needs to be replaced. If you need to replace the battery, proceed as follows:

1. Disconnect the battery cables, (REMEMBER TO REMOVE THE NEGATIVE "GROUND" CABLE FIRST), and remove the old battery from the tractor.
2. Wash the battery mounting area and clamps with soap and water. Remove corrosion from cable ends with a wire brush. Check the new battery to be sure it is filled with the special electrolyte to the rings or marks and the vent holes in the filler caps are open.
3. Carefully place the new battery in the tractor. Fasten the battery hold down clamp and connect the cables. **CONNECT THE (+) POSITIVE CABLE FIRST.**
4. After tightening the cable clamps, put a liberal coat of grease or vaseline on them to inhibit corrosion.

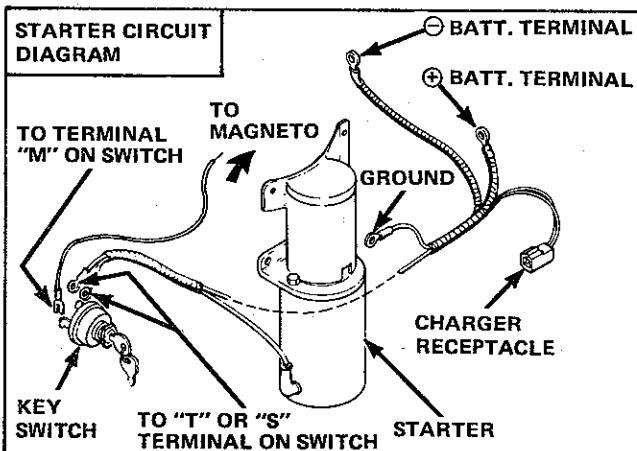


FIGURE 27

Belt Replacement: The tractor drive belt can be easily replaced with the tractor in the vertical position. REMEMBER TO DRAIN THE FUEL AND REMOVE THE BATTERY BEFORE RAISING THE TRACTOR.

1. Depress the foot pedal to remove tension from the belt and remove the old belt.
2. Install the new belt insuring it is twisted in the same manner. The part of the belt leaving the left side of the engine drive pulley goes to the bottom side of the transmission pulley.
3. Check the belt finger adjustments and the adjustments of the clutch rod. See Adjustments Section of pages 7 & 8.

GENERAL REPAIR

To prevent rusting, sand off and paint any parts which become chipped or damaged. Apply a good rust preventative to all bare metal parts. Keep all fasteners and guards tightened securely.

OFF SEASON STORAGE

When the tractor is to be stored without use for a period of two months or longer, the following precautions should be taken to insure your tractor will be ready to go when you need it.

1. Empty the fuel tank completely by running the tractor until it stops. If you desire, fuel may be stored in the tank or a small container if a good brand of gasoline stabilizer is used. This additive, available from your Simplicity dealer, prevents formation of gum and varnish for up to one year, providing easier starting and a clean fuel system.
2. Remove spark plug, pour one ounce of 10W-30 oil into cylinder through plug hole. Crank engine a few times to distribute oil and reinstall the plug.
3. Clean dirt and chaff from cylinder head fins and engine housing.

4. Grease all zerks and apply oil to all points shown in "Maintenance".

5. Block the machine up off the wheels to relieve weight and keep tires off a damp floor. Protect the tires from prolonged exposure to direct sunlight.

6. Store the machine in a dry place indoors.

STARTING AFTER STORAGE

1. Remove the spark plug and wipe dry. Crank the engine a few times to blow the excess oil out of the plug hole. Reinstall the plug.
2. Fill the fuel tank with fresh "regular" gasoline. (Unless a fuel stabilizer has been used.)
3. Service the air cleaner. See "Maintenance".
4. Check the crankcase oil level and replenish if necessary. See "Maintenance".
5. Start the engine outdoors or in a well ventilated area. DO NOT run engine at high speed immediately after starting.
6. Inflate the front tires to 12 - 15 PSI and rear to 6 - 8 PSI.

REPLACEMENT PARTS

Replacement parts for your Simplicity equipment should be purchased from your Simplicity dealer. Be prepared to give him the tractor name, model, and the ID number found on the place pictured below.

USE ONLY SIMPLICITY BELTS AND BLADES

SIMPPLICITY MANUFACTURING CO., INC.
PORT WASHINGTON, WIS., U.S.A.

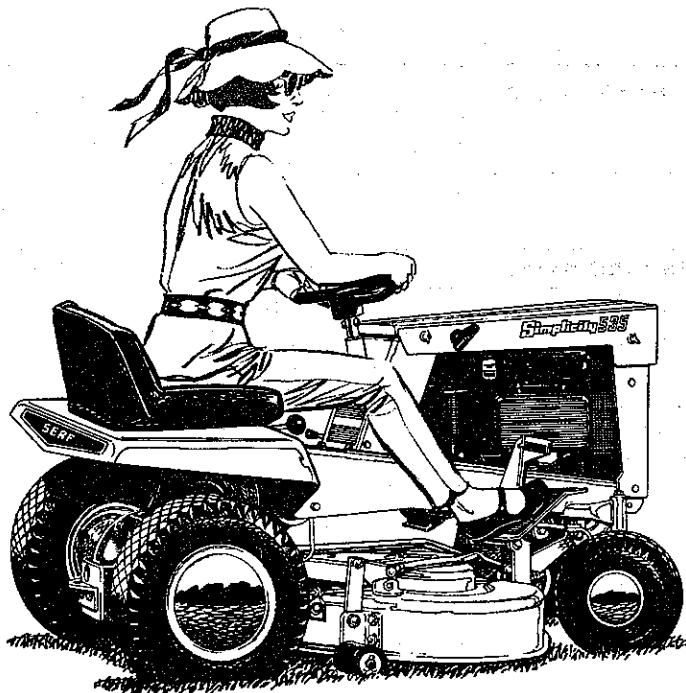
Refer to i.d. no. when
writing or ordering parts.

I.D. No.

SPECIFICATIONS

| | | | |
|----------------------|---------------------------------------|---|--|
| MODEL DESIGNATION | SERF 535 | Manual Starting | |
| | MFR'S. NO. 776 | Mower Included | |
| | SERF 535 | Electric Starting with 110 Volt Trickie Charger | |
| | MFR'S. NO. 777 | Mower Included | |
| ENGINE | MAKE: BRIGGS & STRATTON | MODEL NO: 130902 (Manual Start) 130905 (Electric Start) | CYLINDERS: 1 BORE: 2-9/16 Inches STROKE: 2-7/16 Inches |
| | MANUAL STARTER | HORSEPOWER: 5 CYCLES: 4 | DISPLACEMENT: 12.57 Cu. In. CRANKSHAFT: Vertical |
| | ELECTRIC STARTER | TYPE: Bendix Starter, Key Ignition Switch 12 Volt - 18 Amp. Hr. Battery with 100 M.A. Trickie Charger | |
| | IGNITION | TYPE: High Tension Magneto, Patented Design Dust-Proof Breaker Enclosure | |
| | GOVERNOR | TYPE: Adjustable, Mechanical, Running in Oil RANGE: 2200 to 4000 R.P.M. | |
| | AIR CLEANER | Sealed Joint between Housing and Oiled Foam Element ELEMENT: Reusable Polyurethane Foam | |
| | CRANKCASE | BREATHER: Ventilated through Carburetor LUBRICATION: Gear Impeller System OIL CAPACITY: 1-3/4 Pints | |
| | EXHAUST VALVE AND SEAT | Austenitic Steel with Sintered Alloy Inserts | |
| | FUEL TANK | MATERIAL: Epoxy Resin Sealed, Terne Coated Steel CAPACITY: 2 Quarts | |
| | MUFFLER | Quiet, Compact, Low Back Pressure | |
| TRANSMISSION | TYPE | All Spur Gear, Running in Oil Bath | |
| | MATERIAL | GEARS: Carburized and Hardened | |
| | | SHAFTS: Hardened and Ground | |
| | | BEARINGS: Sintered Iron | |
| | LUBRICATION | SAE 90 OIL. CAPACITY: 1 Quart | |
| | SPEEDS | Three Forward, One Reverse | |
| | SPEED RANGE | LOW: Up to 0.9 M.P.H. SECOND: Up to 2.3 M.P.H. HIGH: Up to 3.5 M.P.H. | |
| | | REVERSE: Up to 3.5 M.P.H. | |
| | DIFFERENTIAL | All-Gear, Controlled Traction Type | |
| | FRAME | Inverted Channel, Electrically Welded, Heavy Gauge Steel POWER TAKE-OFF POINTS: Front and Rear | |
| CHASSIS | | ENGINE MOUNTING: Above Front Axle PIVOT POINT LOCATION: At Rear Axle | |
| | REAR WHEELS | PNEUMATIC INFLATION PRESSURE: 6 to 8 P.S.I. TIRE SIZE: 16 x 6.50 x 8 | |

| | | |
|----------------------|---------------------------|--|
| CHASSIS (Cont'd.) | FRONT WHEELS | PNEUMATIC INFLATION PRESSURE: 15 P.S.I. |
| | | TIRE SIZE: 4.10/350-4 |
| | | BEARINGS: Powdered Iron, with Grease Fittings |
| | SEAT | TYPE: Bucket, Rubber Mounted COVER: Deluxe Leatherette Covered Bonded Foam |
| CONTROLS | TURNING RADIUS | INSIDE REAR TIRE: 20 Inches |
| | STABILITY | 40% Uphill and Sidehill Slope (With Weights) 20% Without Wts. |
| | STEERING | Steering Wheel Type SYSTEM: 1-to-1 Ratio, Lever and Drag Link |
| | CLUTCH AND BRAKE PEDAL | LOCATION: Right Front CLUTCH: Soft Action, Touch-O-Matic V-Belt BRAKE: External Band Type |
| | | Parking Brake Lock Standard Equipment |
| | | IMPLEMENT LIFT LEVER: Right Side (Optional Equipment) |
| DIMENSIONS | LOCATION | GEAR SELECTOR: Front Center of Seat POWER TAKE-OFF LEVER: Left Side THROTTLE AND CHOKE: Front Center of Seat PARKING BRAKE LOCK: Lower Left of Seat MANUAL STARTER: Right Side of Tractor Hood ELECTRIC STARTER: Key at Right of Instrument Panel |
| | OVERALL LENGTH | 51-1/2 Inches |
| | WIDTH | OVERALL WIDTH: 28-1/2 Inches (Less Attachments) |
| | | REAR WHEEL TREAD: 21-1/2 Inches |
| | HEIGHT | TO TOP OF STEERING WHEEL: 32 Inches |
| | | TO TOP OF ENGINE COVER: 27-3/4 Inches |
| | WHEEL BASE | 37-5/16 Inches |
| | WEIGHT | TRACTOR ONLY - MANUAL START |
| | | Net 228 Ship 264 TRACTOR ONLY - ELECTRIC START |
| | | 248 284 |



SIMPLICITY'S NEW EQUIPMENT WARRANTY

The Company warrants Simplicity products to be free from defects in material and workmanship, except the Company makes no warranty, express or implied, with respect to tires, engines, generators and voltage regulators, which are warranted by their respective manufacturers. Any part covered by this warranty which is proven defective within one year (45 days for equipment used for rental, municipal or commercial purposes) under normal use, from date of purchase, will be replaced without charge, provided such part is returned to the factory, (if requested), and is found to be defective upon examination at the factory. This warranty does not apply to any Simplicity products altered outside of the Simplicity factory. **THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, PERFORMANCE, OR OTHERWISE.** The Company's obligation under its warranty is strictly and exclusively limited to the replacement of such parts, and in no event shall the Company be liable for any other damages, whether direct, immediate, incidental, special, or consequential. Simplicity Manufacturing Company, Inc., reserves the right to modify or change specifications without prior notification. There are no warranties which extend beyond the description of any Simplicity product.

ROTARY MOWER

Mfg. No. 599, 28" for use on SERF tractor.

RECOMMENDED ACCESSORIES

Two rear wheel weight Mfg. No. 449 when moving across slopes between 20% and 40% grade, and one front weight Mfg. No. 466 when moving up slopes between 20% and 40% grade.

Mfg. No. 594 lift lever assembly on Serf adds convenience.



INSTALLATION

1. If the deflector (vacuum collector adapter if you are using the vacuum collector) is not already on your mower, install it using the appropriate hardware. NEVER OPERATE THE MOWER WITHOUT THE DEFLECTOR OR VACUUM COLLECTOR ADAPTER IN PLACE.

2. Turn the tractor wheels all the way to the right.

3. Slide the mower under the tractor from the left side of the tractor and straighten the wheels.

4. Attach the mower hitch arms to the ears on the tractor front axle. Use two pins and spring clips, placing them through the front holes in the ears and the hole at the end of the hitch arms. (See Figure 1).

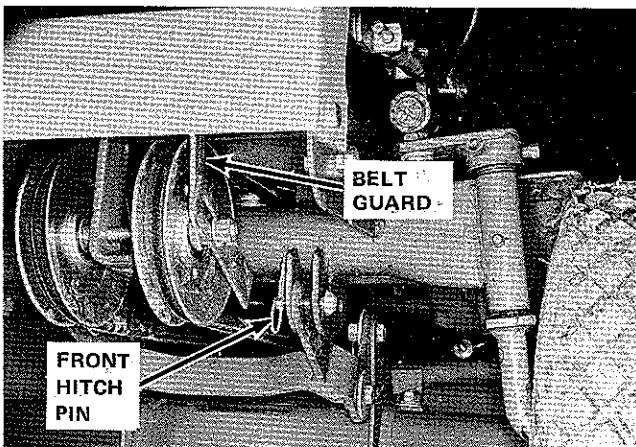


FIGURE 1

5. (Serf tractor with 594 lift kit) Place the tractor lift lever in the back position and attach the lift chain to the lift lever using the pin and spring clip. (See Figure 3).

(Serf tractor) Be sure the belt is placed around the mower pulleys as shown in Figure 2. Feed the free end of the belt under the front axle, around the idler pulleys and over the front axle. Place it through the belt stop and around the large engine pulley. (See Figure 2).

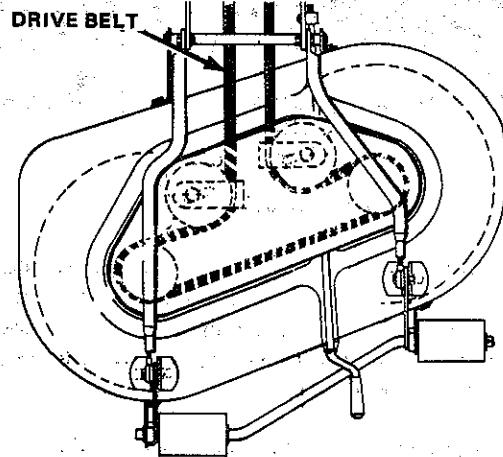


FIGURE 2

OPERATION

MOWER OPERATION

1. Lower the mower to operating position by grasping the lift lever handle, depressing the thumb button to free the latch and moving the lever back. On a Serf without the lift lever, grasp the mower and unhook the wire hook. NEVER OPERATE THE MOWER IN THE RAISED POSITION!

2. So that the engine will absorb the additional load, move the engine speed control lever up so the engine runs at three-fourths to full speed.
3. Engage the mower by pushing the power take-off lever forward and down all the way. (See Figure 4).

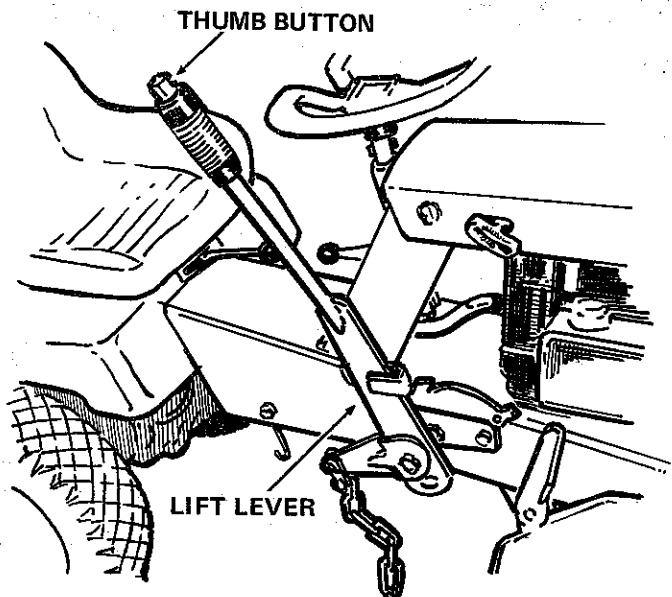


FIGURE 3

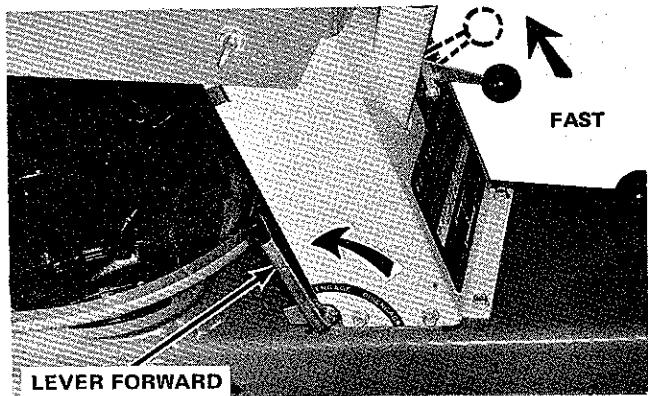


FIGURE 4

HEIGHT ADJUSTMENT

Before starting the engine, the mower height should be checked. To adjust the mower for height of cut, turn the height adjusting handle at the right rear of the mower, clockwise to raise the blades and counter-clockwise to lower them. (See Figure 5).

Most lawns should be mowed to keep the grass approximately two to three inches high. For your first use of the mower set the height at $2\frac{1}{2}$ inches. Best results are obtained by cutting often and not too short. To keep a green lawn,

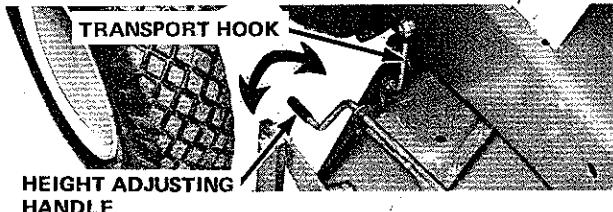


FIGURE 5

never mow more than one third off the height of the grass or a maximum of one inch in one mowing. For extremely tall grass, set the cutting height at maximum for the first mowing then reset to the desired height and mow again. Allow the grass to grow to three inches, then cut off only the top inch.

MOWER SPEED

The engine speed control should always be set at three-fourths to full engine speed when mowing. Choose the transmission gear according to the type of grass to be cut and the terrain. The operator will learn with experience what gear to use in various conditions, but you may find these guidelines helpful:

Very Tall, Thick, Wet or Rough Lawns: You should use first gear where the grass is very tall, thick or wet or the ground is so rough as to cause the mower to bounce at higher speeds.

Normal Lawns: In second gear, the mower will do an excellent job of cutting dry grass of normal thickness and height as recommended above under "height adjustment".

Light Grass: Mowing less than one inch, you may use third gear where the grass is not heavy and the ground is smooth.

MOWING PATTERN

Guide the right side of the mower along trees, post or other obstacles and follow the contour as closely as possible.

Dispersal: If the clippings are to remain on the lawn, mow with the discharge side toward the area already cut. If the clippings will be raked up later and the grass is at a normal height of three inches or less, it is practical to disperse the clippings into the un-cut area. There they will be concentrated in the center of the lawn for minimum raking.

Wet, Thick or Heavy Grass: Start at the outer edge of the area and mow clockwise so that clippings are always deposited on cut grass. Less engine power is required and a more even cut free of streaks will result. Change patterns occasionally to eliminate matting, graining and a corrugated appearance. See diagrams below. (Figure 6).

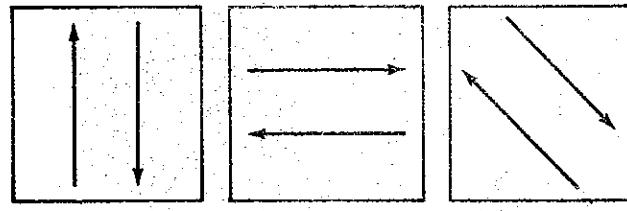


FIGURE 6

MOWING HINTS

On thick or springy grass or soft ground, the mower wheels may sink in the ground giving too low a cut. Adjust the cutting height to get the desired height of cut. For best appearance, grass should be cut in the afternoon or evening when it is free of moisture.

TROUBLE SHOOTING

IF BELT SLIPPAGE OCCURS, check the following:

1. Belt may be stretched or excessively worn.
2. Pulleys may be greasy or oily. (See "Maintenance".)
3. Insufficient belt tension due to a worn or broken tension spring on clutch rod or mower idler pulley, or an improperly adjusted idler pulley. (See "Adjustments").
4. If the belt jumps off the mower pulley when the power take-off is engaged, there may be too much belt slack or the mower pulley belt stops are out of position. (See "Adjustments").

IF A BELT BREAKS, check the following:

1. Look for sharp edges or rough spots on pulleys.
2. Pulleys may be misaligned.
3. Belt tension may be too tight.
4. Mower front to rear height adjustment incorrect.

ADJUSTMENTS

Front to rear height adjustment: With the mower properly attached to the tractor, move the tractor onto a flat, smooth surface. Check tractor tires for proper pressure.

1. Loosen the left hand front bracket "A" and the right hand rear bracket "B" (See Figure 7).
2. Remove the two shoulder bolts that hold adjusting arms (See Figure 7). Be sure all roller bracket linkage is free to slide in slotted holes.
3. Establish points 1 and 2 (See Figure 7). Rotate blades to point 1 and 2. Raise the mower using the height adjusting handle (See Figure 7) so that the blade tip at point 1 is $1/8$ higher than point 2. When measuring this dimension, always rotate the blade so that all measurements are made using the same blade tip (i.e., after measuring the front tip, rotate the blade so that the rear measurement is made using the same blade tip).

IF AN UNEVER CUT RESULTS, check the following:

1. Mower may not be adjusted properly.
2. Mower housing may be bent or damaged.
3. Blade arbor tubes may be bent.
4. Front tractor tires may not be properly inflated.

IF A POOR OR ROUGH LOOKING CUT RESULTS, check the following:

1. Blades may need sharpening.
2. Grass may be too high or gone to seed.
3. Drive belt may be slipping.
4. Mower may not be level from side to side.
5. Front to rear height adjustment may be incorrect.
6. Engine speed must be at three-fourths to full throttle.

IF VIBRATION OCCURS, check the following:

1. Arbor shaft or tube (or both) may be bent.
2. Blade may be unbalanced.
3. Drive pulley may be bent or misaligned.

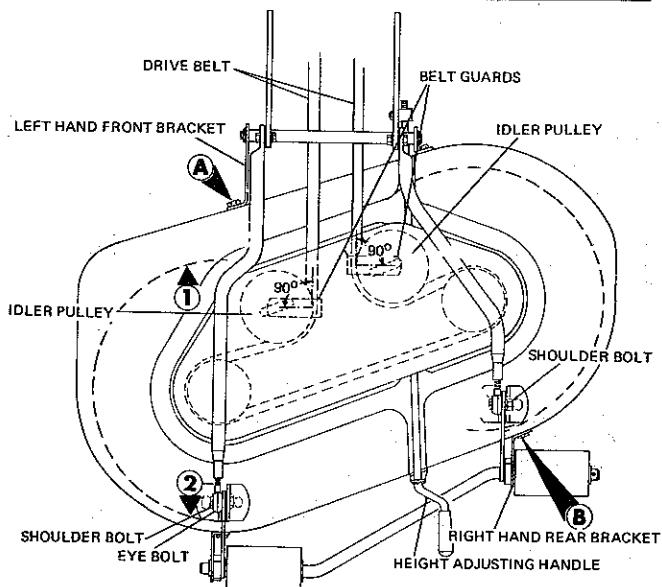


FIGURE 7

4. Place a 1-1/2" block under each arbor spindle to insure that the mower maintains a level positoin. Be sure all roller bracket linkage is free to slide in slotted holes (that the rollers are not holding the mower up). Tighten the front bracket at "A" first, then tighten the rear bracket at "B"

5. Remove the 1-1/2" blocks. Repeat Step No. 3, then proceed to Step No. 6.

6. Replace the shoulder bolts. If the holes do not line up (without pressure) screw the eye bolt (See Figure 7) into or out of the adjusting arms as necessary.

The mower must be mounted on the tractor to make this adjustment. Remove the three mounting nuts holding the belt cover on the mower housing and remove the cover. Loosen the idler pulleys mounting nuts and move the pulleys inward to increase belt tension. Move both pulleys in their slotted mounting holes. (See Figure 8).

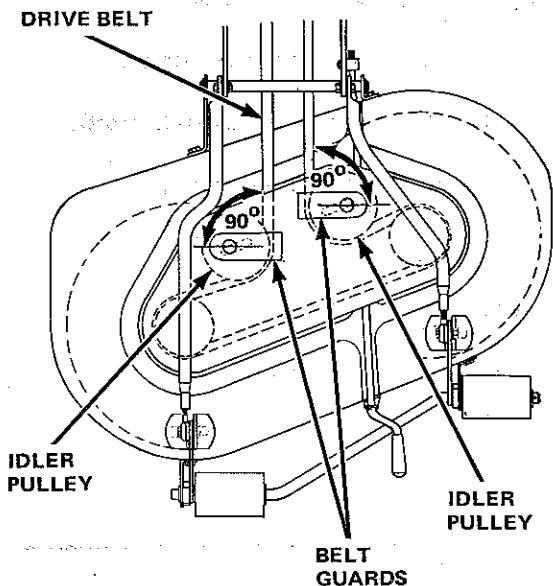


FIGURE 8

Position the belt guards as shown and retighten the nuts. The belt guards must be positioned 90 degrees from the belt as shown and must NOT touch the belt when the power take-off lever is engaged. After the pulleys have been re-positioned, check for the one-fourth inch clearance on the P.T.O. rod stop collar. (See Figure 9).

BELT STOP ADJUSTMENT

The belt guard on the tractor idler pulleys should be positioned as shown in Figure 10.

The mower belt guards on the 28 inch mower should be adjusted during the drive belt adjustment procedure.

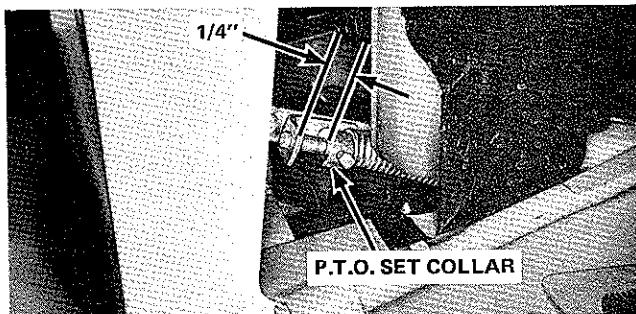


FIGURE 9

POWER TAKE-OFF ADJUSTMENT

Should an attachment fail to drive properly, the power take-off clutch may need adjusting. The power take-off

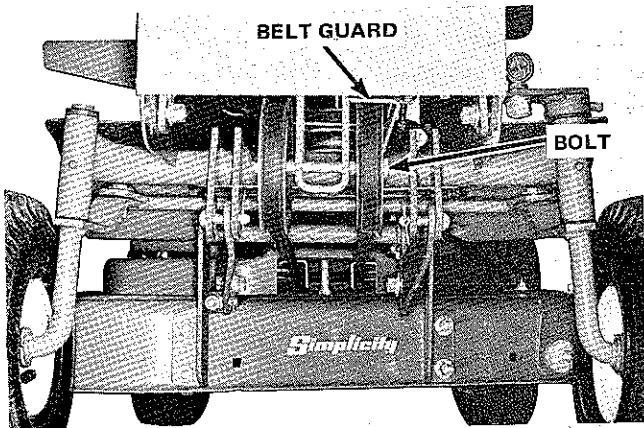


FIGURE 10

clutch is normally in proper adjustment when there is one-fourth inch clearance between the set collar and the end of the bracket when engaged. If more tension is needed or re-adjustment is necessary, disengage the power take-off lever, loosen the collar set screw and slide the collar back slightly.

Tighten the set collar screw. Engage the lever and check the belt tension. Only enough tension to drive the mower without belt slippage is necessary. Excess tension may cause premature failure of belts and pulley bearings. (See Figure 9).

MAINTENANCE

AFTER EACH USE

Clean the under side of the deck of grass clippings to prevent a build-up from hampering the efficiency of the mower. Remove the mower from the tractor to clean it thoroughly.

EVERY 25 HOURS

Place a few drops of light engine oil on all pivot points of

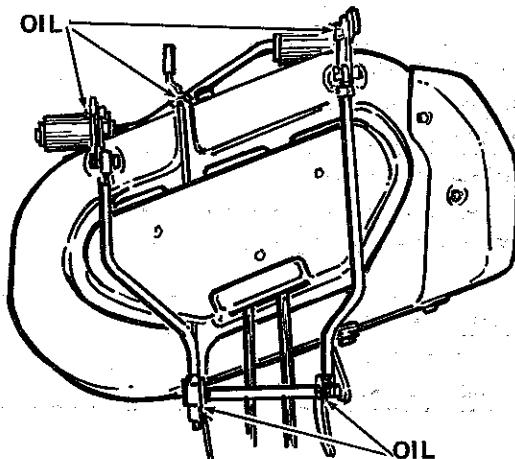


FIGURE 11

the mower. Be careful not to get oil on the belts. See Fig. 19)

EVERY 50 HOURS or ONCE EACH SEASON

Remove paint and dirt from the zerk's on the arbors and put five shots of grease in each one. DO NOT OVER GREASE AS EXCESS GREASE MAY BE FORCED THROUGH THE UPPER SEAL AND GET ON THE BELT CAUSING SLIPPAGE. (See Figure 12).

BLADE REPLACEMENT

Do not attempt to remove the blades until you have the correct size box,socket or open end wrenches for the blade mounting bolts.

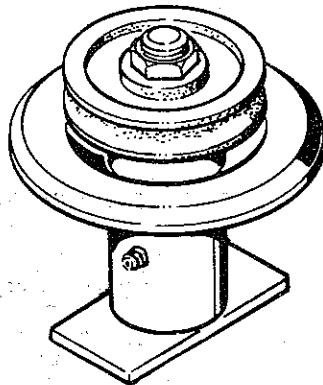


FIGURE 12

Note: DO NOT remove the arbors. Remove the blades from the arbors. To sharpen a blade yourself, clamp it in a vise and use a 10 inch file along the original bevel. File to a razor edge. To balance, insert a knife blade or small rod through the center hole to see if blade rests with both ends balancing evenly. File heavy side until even.

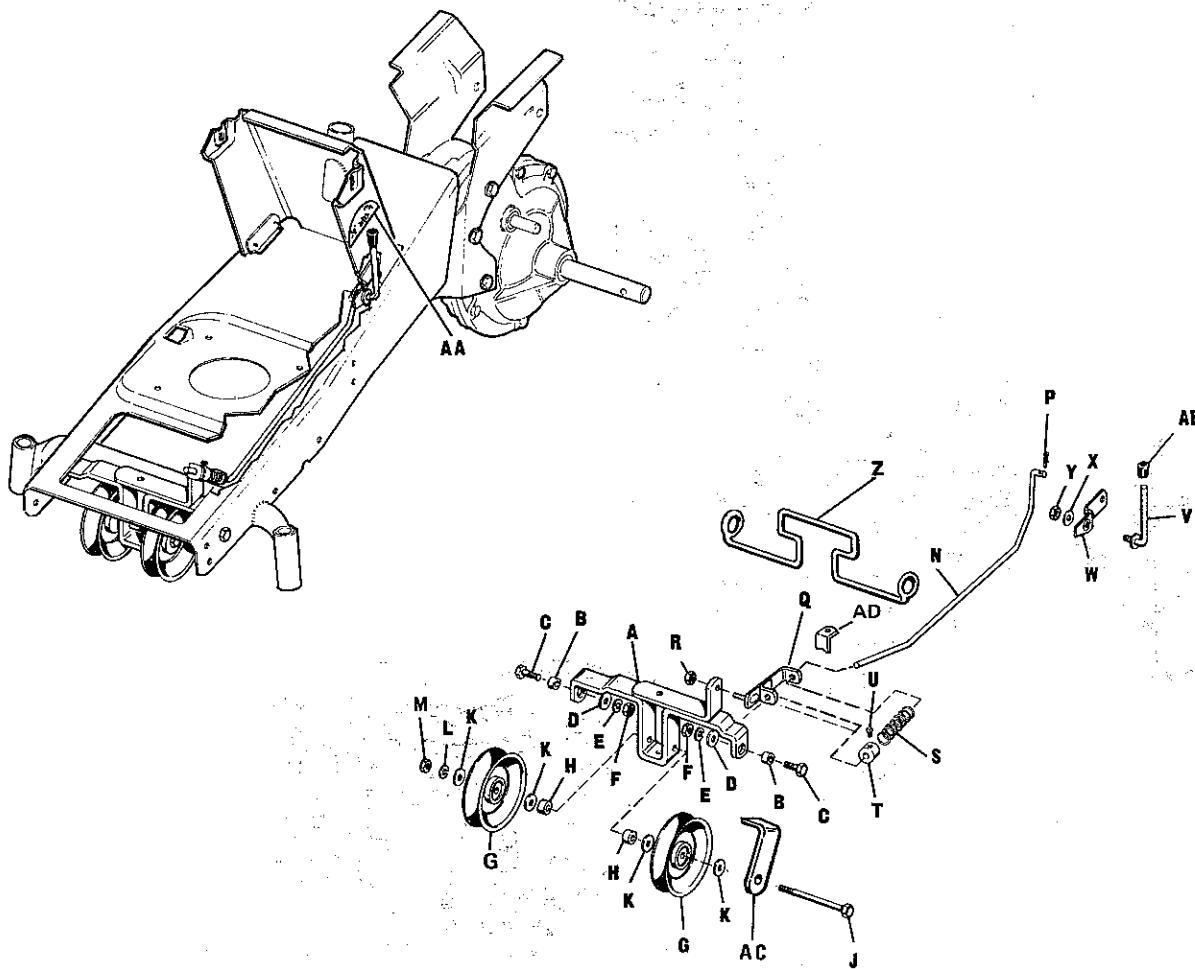
Caution: ALWAYS HANDLE BLADES WITH CARE TO AVOID INJURY.

Carefully clean the blade and arbor. Install the new or sharpened blade with the lift tabs toward the top. Install the two blade mounting screws and tighten the bolts alternately two turns at a time to 30 ft. lbs. torque. Use a block or wedge to keep the blade from turning while tightening bolts. Rotate the blades by hand slowly to see that the ends clear the housing all around and the tips are running true. If the mower is properly adjusted and in apparent good condition, but seems to require excess engine power, it may be that an arbor shaft or sleeve has been damaged by hitting an obstruction. Check the blade drive system. The rotor spindles should turn with one or two lbs. pull on the blade with the drive belt removed. If the pull pressure exceeds two lbs., the unit is robbing power from the engine. Tight bearings, a bent arbor shaft or spindle housing can be repaired or replaced by your Simplicity dealer.

MFR'S. NO. 599 - 28" ROTARY MOWER SPECIFICATIONS

| | | |
|--|-------------------------|--|
| ROTARY MOWER MFR'S. NO. 599 | MOUNTING | 2 Pins - Mower to Front Axle; Transport Hook at Rear |
| | CUTTING WIDTH | 28 Inches |
| | CUTTING HEIGHT | 1-5/8 to 3-1/8 Inches, Infinitely Adjustable by Single Crank |
| | CUTTING RATE | Up to 1 Acre Per Hour |
| | NO. OF BLADES | Two |
| | SPINDLE MOUNTING | Sealed Rolling Contact Bearings |
| | DRIVE | Cushioning V-Belt, Idler Controlled |
| | REAR SUPPORT | Two Rollers, Each 4 Inches Wide |
| | HOUSING | MATERIAL: One-Piece Drawn Steel LOWER EDGE OF HOUSING: 1/4 Inch Below Blade LOWER EDGE OF DISCHARGE OPENING: 1/4 Inch Above Blade |
| | DIMENSIONS | OVERALL LENGTH: 25 Inches OVERALL WIDTH: 29-3/4 Inches WEIGHT: Uncartoned, Approximately 62 Lbs. |

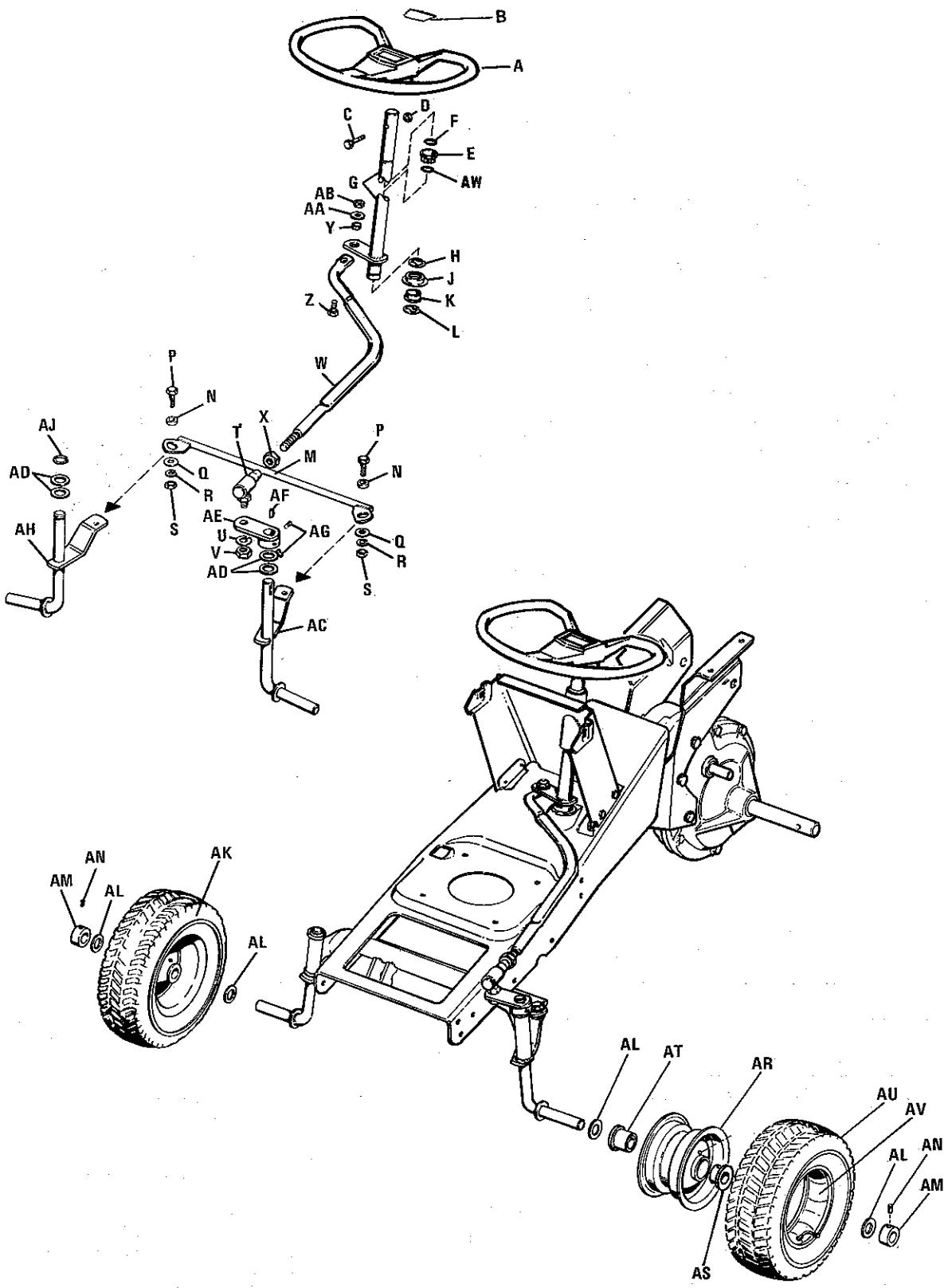
POWER TAKE OFF GROUP



| Ref. Let. | Part No. | Description |
|-----------|----------|----------------------------------|
| A | 163063 | Pulley Clevis Assembly |
| B | 154177 | Spacer |
| C | 705005 | Hex. Cap Screw, 3/8"-16 x 1" |
| D | 719001 | Plain Washer, 3/8" |
| E | 720002 | Lock Washer, 3/8" |
| F | 717003 | Full Hex. Nut, 3/8"-16 |
| G | 101096 | Pulley |
| H | 154177 | Spacer |
| J | 705059 | Hex. Cap Screw, 3/8"-16 x 4-1/4" |
| K | 719002 | Plain Washer, 5/16" |
| L | 720002 | Lock Washer, 3/8" |
| M | 717003 | Full Hex. Nut, 3/8"-16 |
| N | 163096 | P.T.O. Rod Clutch |
| P | 722016 | Cotter Pin, 3/32" x 5/8" |

| Ref. Let. | Part No. | Description |
|-----------|----------|------------------------------|
| Q | 163100 | Rod Guide Assembly |
| R | 717511 | Full Lock Hex. Nut, 5/16"-18 |
| S | 163103 | Spring |
| T | 8191022 | Set Collar |
| U | 713001 | Set Screw, 1/4"-20 x 3/8" |
| V | 158186 | Handle |
| W | 163061 | Handle Lever |
| X | 719001 | Plain Washer, 3/8" |
| Y | 717510 | Full Lock Hex. Nut, 3/8"-16 |
| Z | 163080 | Belt Stop |
| AA | 162093 | P.T.O. Decal |
| AB | 159112 | Knob |
| AC | 162115 | Belt Stop |
| AD | 163112 | Bracket |

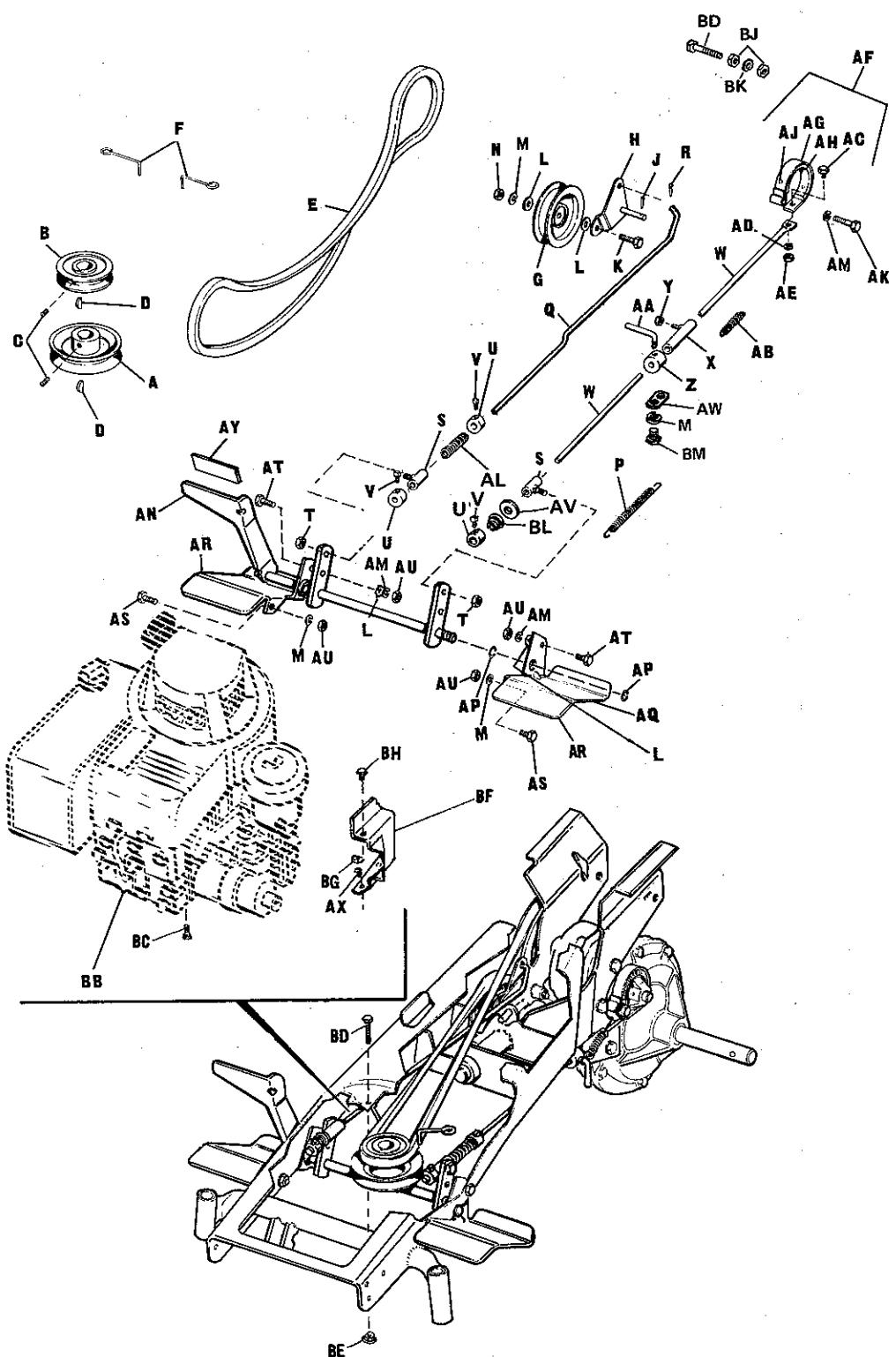
STEERING & FRONT WHEEL GROUP



STEERING & FRONT WHEEL GROUP PARTS LIST

| Ref. Let. | Part No. | Description |
|--------------|-------------|-----------------------------------|
| A | 163113 | Steering Wheel Assembly |
| B | 170107 | Decal |
| C | 705019 | Hex. Cap Screw, 5/16"-18 x 1-1/4" |
| D | 717511 | Full Lock Hex. Nut, 5/16"-18 |
| E | 157077 | Steering Bushing |
| F | 157241 | Snap Ring |
| G | 170105 | Steering Shaft Assembly |
| H | 157286 | Retainer Ring |
| J | 158012 | Steering Shaft Cup |
| K | 159026 | Bushing |
| L | 157286 | Retainer Ring |
| M | 163023 | Drag Link Assembly |
| N | 154177 | Spacer |
| P | 162053 | Special Screw |
| Q | 719001 | Plain Washer, 3/8" |
| R | 720002 | Lock Washer, 3/8" |
| S | 717003 | Full Hex. Nut, 3/8"-16 |
| T | 154301 | Ball Joint |
| U | 720004 | Lock Washer, 1/2" |
| V | 717008 | Full Hex. Nut, 1/2"-20 |
| W | 170091 | Tie Rod |
| X | 717016 | Jam Hex. Nut, 1/2"-20 |
| Y | 121349 | Spacer |
| Z | 705005 | Hex. Cap Screw, 3/8"-16 x 1" lg. |
| AA | 719001 | Plain Washer, 3/8" |
| AB | 717510 | Full Lock Hex. Nut, 3/8"-16 |
| AC | 163033 | L.H. Spindle Assembly |
| AD | 108181 | Washer |
| AE | 163007 | Steering Lever Assembly |
| AF | 725504 | Key |
| AG | 713006 | Set Screw, 5/16"-18 x 1/2" |
| AH | 163030 | R.H. Spindle Assembly |
| AJ | 157286 | Retainer Ring |
| AK | 163106 | Wheel & Tire Assembly |
| AL | 101022 | Washer |
| AM | 8021010 | Set Collar |
| AN | 713503 | Set Screw, 5/16"-18 x 5/16" |
| AR | 163107 | Wheel |
| AS | 163111 | Bearing, Relief (For Service) |
| AT | 163110 | Wheel Bearing (For Service) |
| AU | 163108 | Tire |
| AV | 163109 | Tube |
| AW | 154264 | Snap Ring |

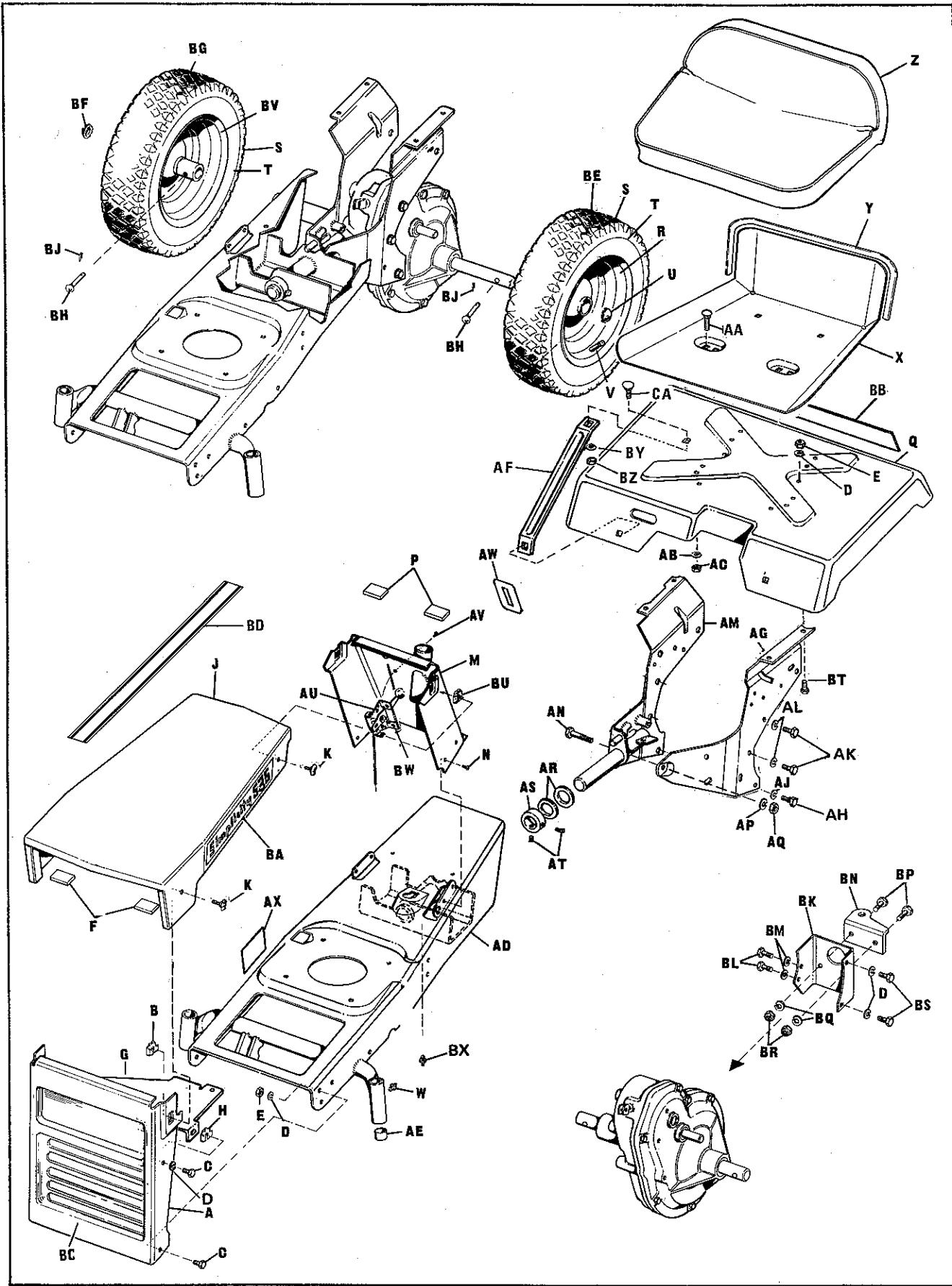
ENGINE, PULLEY, BRAKE & CLUTCH GROUP



ENGINE, PULLEY, BRAKE & CLUTCH GROUP PARTS LIST

| Ref. Let. | Part No. | Description |
|-----------|----------|---|
| A | 163077 | Engine Pulley (Large) |
| B | 163010 | Engine Pulley (Small) |
| C | 713503 | Set Screw, 5/16"-18 x 1/2" |
| D | 154096 | Key |
| E | 163011 | "V" Belt |
| F | 163065 | Belt Stop, 3/16" x 3/4" x 5-7/8" |
| G | 106716 | Idler Pulley |
| H | 162021 | Pulley Bracket Assembly |
| J | 722009 | Cotter Pin |
| K | 705016 | Hex. Cap Screw, 3/8"-16 x 1-1/4" |
| L | 719002 | Plain Washer, 5/16" |
| M | 720002 | Lock Washer, 3/8" |
| N | 717003 | Full Hex. Nut, 3/8"-16 |
| P | 165068 | Return Spring |
| Q | 170063 | Clutch Rod |
| R | 722009 | Cotter Pin, 1/8" x 3/4" |
| S | 156303 | Rod Guide Assembly |
| T | 717511 | Full Lock Hex. Nut, 5/16"-18 |
| U | 8191022 | Set Collar |
| V | 713001 | Set Screw, 1/4"-20 x 3/8" |
| W | 162092 | Brake Rod, 5/16" Dia. x 30-3/4" |
| X | 165075 | Rod Guide Assembly |
| Y | 717513 | Full Lock Hex. Nut, 1/4"-20 |
| Z | 157087 | Parking Brake Collar |
| AA | 157088 | Parking Brake Lock |
| AB | 159106 | Spring |
| AC | 715031 | Hex. Cap Screw, 1/4"-20 x 1/2" |
| AD | 720003 | Lock Washer, 1/4" |
| AE | 717005 | Full Hex. Nut, 1/4"-20 |
| AF | 156134 | Brake Band Assembly |
| AG | 156135 | Brake Band |
| AH | 156136 | Brake Lining |
| AJ | 724502 | Tubular Brass Rivet |
| AK | 705009 | Hex. Cap Screw, 3/8"-16 x 1-1/2" |
| AL | 157041 | Spring |
| AM | 720002 | Lock Washer, 3/8" |
| AN | 170208 | Clutch Shaft Assembly |
| AP | 158596 | Retaining Ring |
| AQ | 162029 | L.H. Foot Rest |
| AR | 162054 | Foot Rest Cover |
| AS | 705004 | Hex. Cap Screw, 3/8"-16 x 3/4" |
| AT | 705005 | Hex. Capscrew, 3/8"-16 x 1" lg. |
| AU | 717003 | Full Hex. Nut, 3/8"-16 |
| AV | 719001 | Plain Washer, 3/8" |
| AW | 170659 | Spring Anchor |
| AX | 715067 | Taptite Screw, 1/4"-20 x 3/8" |
| AY | 162098 | Pedal Pad |
| BB | | Engine |
| BC | 715079 | Special Screw, 3/8"-16 x 1-1/4" lg. |
| BD | 705018 | Hex. Cap Screw, 5/16LL-18 x 1-1/2" lg. |
| BE | 718033 | Nut, Whiz-Lock, 5/16"-18 |
| BF | 165075 | Muffler Deflector |
| BG | 718038 | Tinnerman Nut |
| BH | 714020 | Self-Tapping Screw # 14 x 5/8" lg. |
| BJ | 717001 | Full Hex Nut, 5/16 - 18 |
| BK | 720001 | Lock Washer, 5/16 |
| BL | 157127 | Spring |
| BM | 715114 | Hex. Hd. Screw, Taptite, 3/8"-16 x 1/2" lg. |

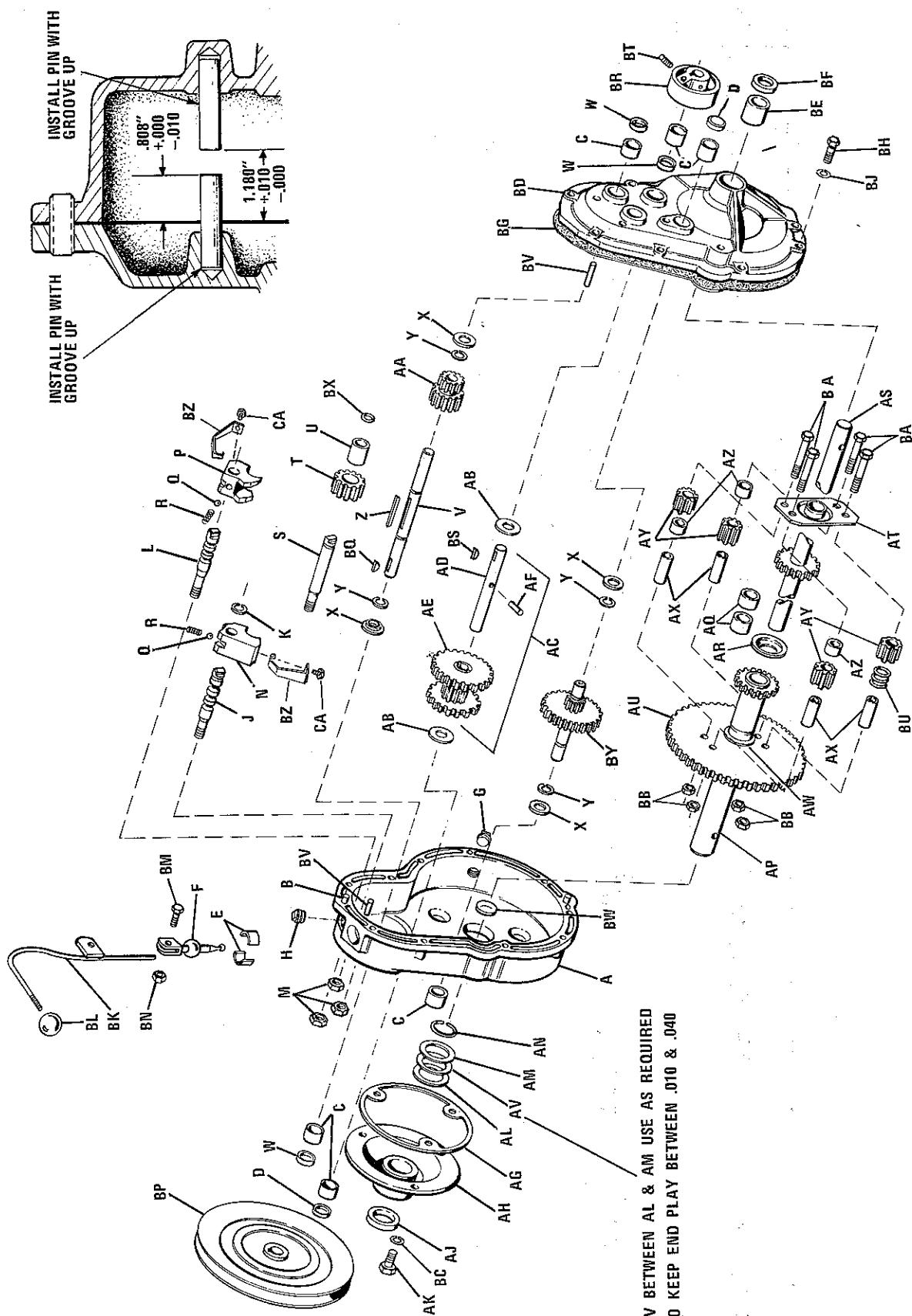
FRAME, HOOD, DASH & SEAT GROUP



FRAME, HOOD, DASH & SEAT GROUP

| Ref. Let. | Part No. | Description |
|-----------|----------|--|
| A | 170928 | Grille |
| B | 718041 | Retainer Nut |
| C | 705012 | Hex. Cap Screw, 5/16"-18 x 5/8" |
| D | 720001 | Lock Washer, 5/16" |
| E | 717001 | Full Hex. Nut, 5/16" |
| F | 106582 | Felt Pad |
| G | 170093 | Grille Support |
| H | 718041 | Retainer Nut |
| J | 170947 | Hood |
| K | 715037 | Thumb Screw |
| M | 170081 | Dash Assembly |
| N | 715067 | Taptite Screw, 1/4"-20 x 3/8" |
| P | 106582 | Felt Pad |
| Q | 165065 | Seat Support |
| R | 171850 | Wheel Assembly, L.H. |
| S | 159156 | Tire |
| T | 153038 | Tube |
| U | 158433 | Plug Button |
| V | 171270 | Valve Stem & Cap |
| W | 727001 | Grease Fitting |
| X | 165066 | Seat Panel |
| Y | 159177 | Seat Pan Tape |
| Z | 162094 | Seat Pad |
| AA | 703005 | Carriage Bolt, 5/16"-18 x 3/4" |
| AB | 720001 | Lock Washer, 5/16" |
| AC | 717001 | Full Hex. Nut, 5/16"-18 |
| AD | 163116 | Frame Assembly |
| AE | 154289 | Bushing |
| AF | 165070 | Brace, Seat Support |
| AG | 165040 | L.H. Side Plate |
| AH | 705004 | Hex. Capscrew, 3/8"-16 x 3/4" |
| AJ | 720002 | Lock Washer, 3/8" |
| AK | 705040 | Hex. Capscrew, 7/16"-14 x 3/4" |
| AL | 720006 | Lock Washer, 7/16" |
| AM | 165039 | R.H. Side Plate |
| AN | 705010 | Hex. Capscrew, 3/8"-16 x 1-3/4" |
| AP | 720002 | Lock Washer, 3/8" |
| AQ | 717003 | Hex. Nut, 3/8"-16 |
| AR | 105050 | Washer |
| AS | 154065 | Set Collar |
| AT | 713006 | Set Screw, 5/16"-18 x 1/2" |
| AU | 171553 | Choke Control |
| AV | 714016 | Self Tap Screw, 1/4"-20 x 1/2" |
| AW | 170098 | Throttle Decal |
| AX | 162072 | Clutch Decal |
| AZ | 156211 | Rear Hub Cap (For Service Only) |
| BA | 171755 | Number Decal |
| BB | 171393 | Rear Emblem |
| BC | 171876 | Grille Decal |
| BD | 163069 | Hood Stripe |
| BE | 171851 | Wheel & Tire Assembly, L.H. |
| BF | 158436 | Plug Button |
| BG | 171862 | Wheel & Tire Assembly R.H. |
| BH | 118053 | Pin |
| BJ | 722009 | Cotter Pin |
| BK | 156191 | Draw Bar Bracket |
| BL | 715030 | Hex. Cap Screw, 3/8"-16 x 3/4" |
| BM | 720002 | Lock Washer, 3/8" |
| BN | 156192 | Clip, Drawbar |
| BP | 715038 | Hex. Cap Screw, 3/8"-16 x 1" |
| BQ | 720002 | Lock Washer, 3/8" |
| BR | 717003 | Full Hex. Nut, 3/8"-16 |
| BS | 705019 | Hex. Capscrew, 5/16"-18 x 1-1/4" |
| BT | 705017 | Hex. Cap Screw, 5/16"-18 x 3/4" lg. |
| BU | 718041 | Retainer Nut |
| BV | 171863 | Wheel Assembly, R.H. |
| BW | 165073 | Speed Clip |
| BX | 727013 | Grease Fitting |
| BY | 720001 | Lock Washer, 5/16" |
| BZ | 717001 | Nut, Hex, Full 5/16" - 18 N.C. |
| CA | 703011 | Bolt, Carriage, 5/16" - 18 N.C. x 1/2" Lg. |

TRANSMISSION



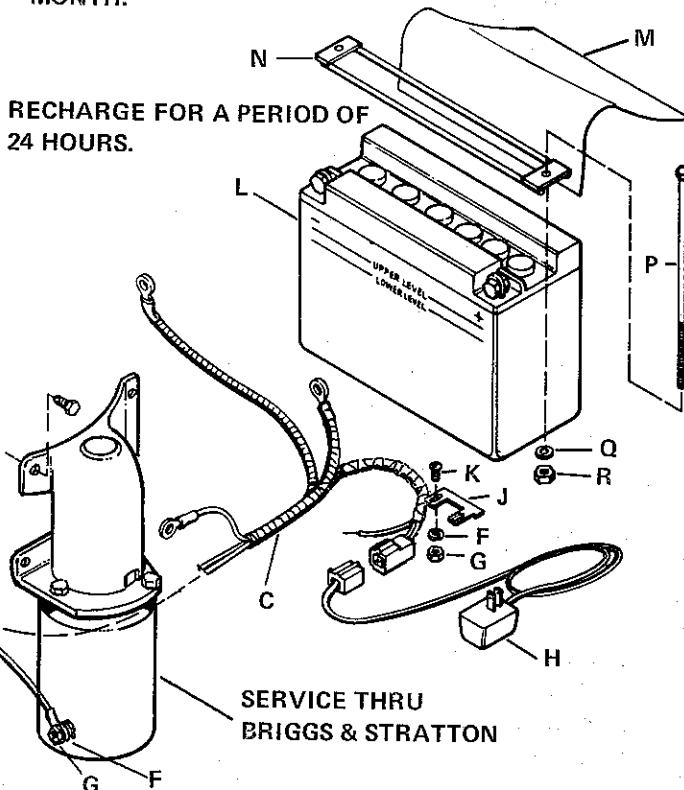
TRANSMISSION

| Ref. Let. | Part No. | Description | Ref. Let. | Part No. | Description |
|-----------|----------|---|-----------|----------|---|
| A | 163094 | Gear Case (Sub Assy. Encludes A, B, C, D, E, F, & BV) | AN | 163017 | Snap Ring |
| B | 723007 | Roll Pin, 3/8" Dia. x 1" | AP | 163045 | Axle & Bushing Assembly R.H. |
| C | 163022 | Bushing | AQ | 158363 | Bushing |
| D | 163050 | Plug | AR | 158358 | Thrust Cup |
| E | 101042 | Half Ball Bushing | AS | 163028 | L.H. Axle Assembly |
| F | 156031 | Shift Rod Assembly | AT | 163054 | Differential Plate Assembly |
| G | 726003 | Pipe Plug, 3/8" | AU | 163013 | Drive Gear |
| H | 726252 | Pipe Plug | AV | 163088 | Washer |
| J | 171365 | Shift Shaft, Reverse & 1st | AW | 158365 | Bushing |
| K | 8061048 | Retainer Ring | AX | 121083 | Differential Pinion Spindle |
| L | 171372 | Hi-Lo Shift Shaft | AY | 158579 | Differential Pinion |
| M | 717022 | Full Hex. Nut, 7/16"-14 | AZ | 121084 | Differential Spacer |
| N | 171363 | Reverse Shift Fork | BA | 715043 | Hex. Cap Screw, 3/8"-16 x 2 1/2" |
| P | 171364 | I & II Shift Fork | BB | 717510 | Full Lock Hex. Nut, 3/8"-16 |
| Q | 154262 | Shift Lock Ball | BC | 720002 | Lock Washer, 3/8" |
| R | 171456 | Spring | BD | 163095 | Gear Case Cover (Sub Assy. Encludes C, D, BE, & BV) |
| S | 165005 | Reverse Pinion Shaft | BE | 163021 | Bushing |
| T | 165007 | Reverse Pinion | BF | 163012 | Oil Seal |
| U | 156082 | Roller Bearing | BG | 156103 | Case Gasket |
| V | 170455 | Pulley Shaft | BH | 705019 | Hex. Cap Screw, 5/16"-18 x 1 1/4" |
| W | 156084 | Oil Seal | BJ | 720001 | Lock Washer, 5/16" |
| X | 156085 | Washer | BK | 165063 | Shift Lever Assembly |
| Y | 8061048 | Retainer Ring | BL | 8021050 | Knob Ball |
| Z | 170453 | Key | BM | 705030 | Hex. Cap Screw, 1/4"-20 x 3/4" |
| AA | 156087 | Hi & Lo Pinion Assembly | BN | 717513 | Full Lock Hex. Nut, 1/4"-20 |
| AB | 156089 | Washer | BP | 156119 | Transmission Pulley |
| AC | 165009 | Shaft & Gear Assembly | BQ | 725504 | Key |
| AD | 165010 | Brake Shaft | BR | 165067 | Brake Drum |
| AE | 165011 | Cluster Gear Assembly | BS | 725505 | Key |
| AF | 156292 | Dowel Pin | BT | 713501 | Set Screw, 5/16"-18 x 1/2" |
| AG | 163009 | Gasket | BU | 162085 | Spring |
| AH | 163056 | Plate Support Assembly | BV | 156308 | Roll Pin Assembly |
| AJ | 163019 | Oil Seal | BW | 163074 | Expansion Plug |
| AK | 705031 | Hex. Cap Screw, 3/8"-16 x 7/8" | BX | 165006 | "O" Ring |
| AL | 163014 | Washer | BY | 165013 | Gear and Shaft Assembly |
| AM | 163015 | Washer | BZ | 171342 | Spring |
| | | | CA | 715133 | Screw, Cap, Hex 5/16"- 18 x 5/16" lg. |

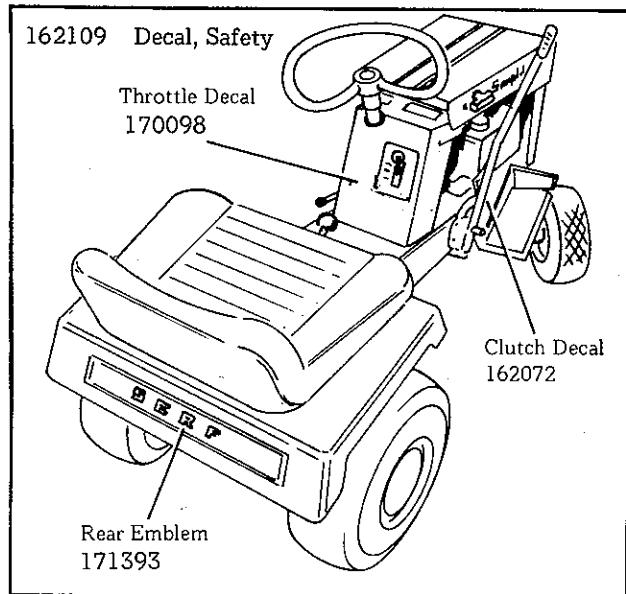
ELECTRIC STARTER

| Ref. Let. | Part No. | Description |
|-----------|----------|--------------------------------|
| A | 122218 | Key Switch |
| B | 122203 | Key & Ring Assembly |
| C | 170047 | Harness Assembly |
| D | 721505 | Lock Washer |
| E | 122234 | Special Hex Nut |
| F | 721003 | Lock Washer No. 10 Ext. Type |
| G | 717007 | Hex Nut Full No. 10-32 |
| H | 122221 | Charger Assembly |
| J | 122225 | Mounting Clip |
| K | 710002 | Machine Screw No. 10-32 x 1/2" |
| L | 122226 | Battery |
| M | 122143 | Battery Insulation |
| N | 122227 | Battery Hold-Down |
| P | 705070 | Bolt, 1/4" x 7" |
| Q | 720003 | Lock Washer, 1/4" |
| R | 717005 | Hex Nut Full, 1/4"-20 |

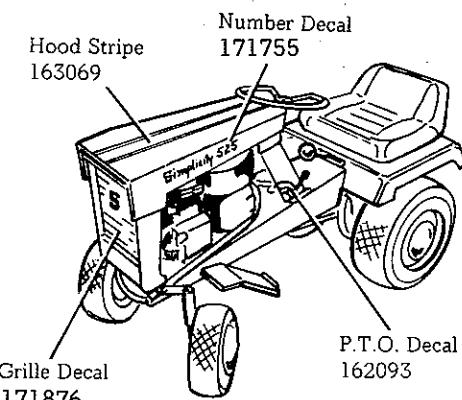
UNDER NORMAL USE THE TRACTOR SHOULD BE RECHARGED ONCE A MONTH.



DECALS

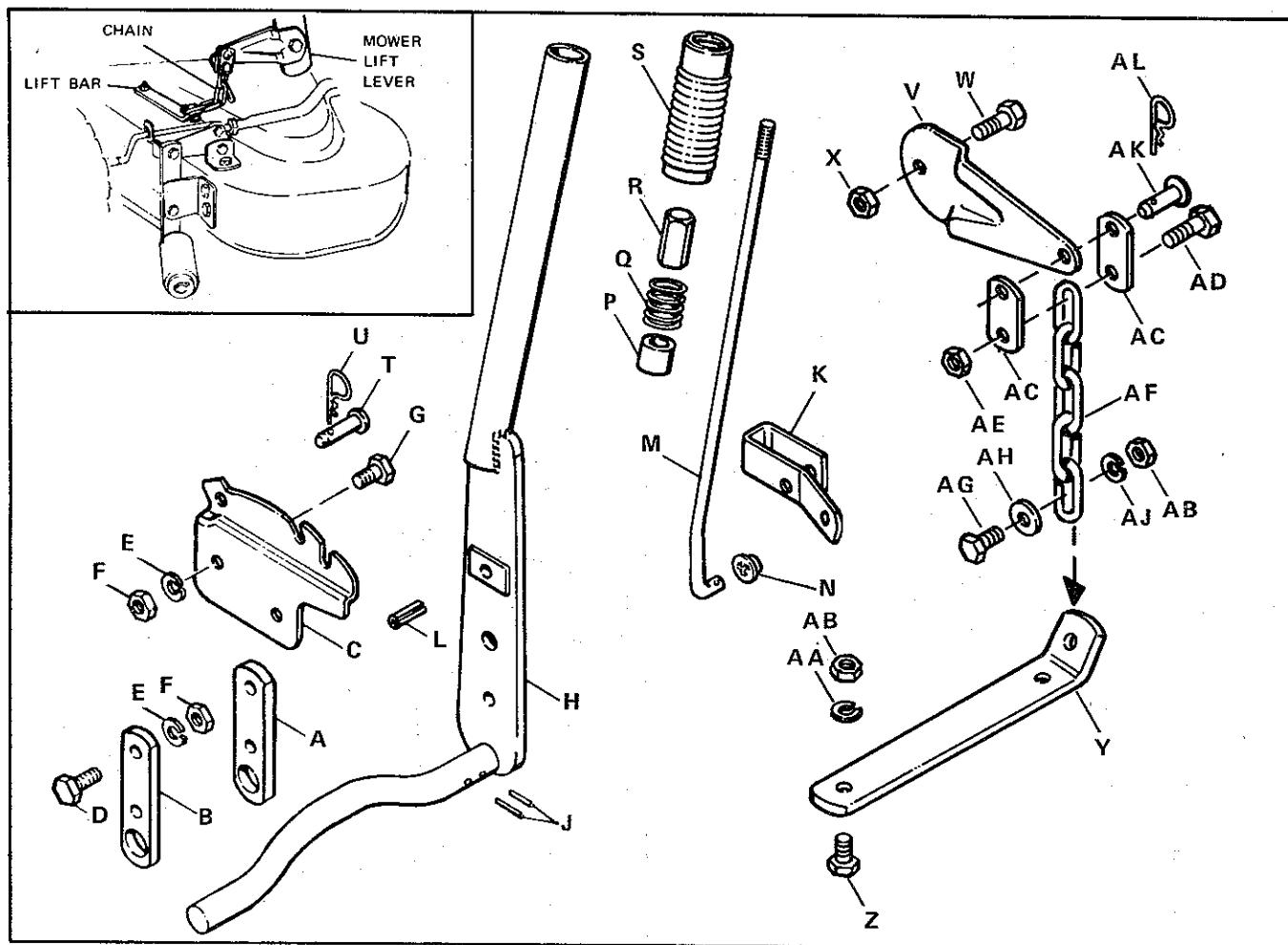


171501 Plate Serial No.



LIFT LEVER KIT

MFRS. NO. 594



| Ref. Let. | Part No. | Description |
|-----------|----------|--------------------------------|
| A | 162069 | R.H. Bearing Bar |
| B | 162070 | L.H. Bearing Bar |
| C | 162068 | Lift Lever Quadrant |
| D | 705005 | Hex. Cap Screw, 3/8"-16 x 1" |
| E | 720002 | Lock Washer, 3/8" |
| F | 717003 | Hex. Nut, Full, 3/8"-16 |
| G | 705004 | Hex. Cap Screw, 3/8"-16 x 3/4" |
| H | 162066 | Lift Lever Assembly |
| J | 723011 | Roll Pin 3/16" dia. x 1" |
| K | 154224 | Lift Lever Latch |
| L | 723007 | Roll Pin 3/8" dia. x 1" |
| M | 170094 | Lift Lever Latch Rod |
| N | 170015 | Push Nut |
| P | 154226 | Spacer |
| Q | 152006 | Spring |
| R | 154227 | Thumb Button |
| S | 156209 | Handle Grip |
| T | 153058 | Pin |

| Ref. Let. | Part No. | Description |
|-----------|----------|--------------------------------|
| U | 8161045 | Spring Clip |
| V | 108385 | Mower Lift Lever |
| W | 705031 | Hex. Cap Screw, 3/8"-16 x 7/8" |
| X | 717510 | Hex. Nut, Full Lock, 3/8"-16 |
| Y | 108375 | Lift Bar |
| Z | 705004 | Hex Cap Screw, 3/8"-16 x 3/4" |
| AA | 720002 | Lock Washer, 3/8" |
| AB | 717003 | Hex Nut, Full, 3/8"-16 |
| AC | 108199 | Mower Lift Link |
| AD | 705005 | Hex Cap Screw, 3/8"-16 x 1" |
| AE | 717510 | Hex Nut, Full Lock, 3/8"-16 |
| AF | 107031 | Chain |
| AG | 705005 | Hex Cap Screw, 3/8"-16 x 1" |
| AH | 719001 | Plain Washer, 3/8" |
| AJ | 720002 | Lock Washer, 3/8" |
| AK | 153058 | Pin |
| AL | 8161045 | Spring Clip |

MOWER HOUSING, DRIVE & BLADES

MFG. NO. 599

| Ref. Let. | Part No. | Description |
|-----------|----------|---|
| A | 108679 | Arbor Tube Assembly |
| B | 108134 | Backing Ring |
| C | 108250 | Arbor Assembly |
| D | 108181 | Washer |
| E | 108202 | Radial Single Row Bearing |
| F | 108257 | Washer |
| G | 108472 | Washer |
| H | 108201 | Spacer |
| J | 108139 | Flinger |
| K | 108142 | Pulley |
| L | 725006 | Woodruff Key, // 61, 3/16" x 5/8" lg. |
| M | 713504 | Set Screw, Socket Head, 5/16"-18 x 3/8" lg. |
| N | 717517 | Lock Nut, Hex Jam, 3/4"-16 |
| P | 108298 | Knife Blade |
| Q | 715024 | Capscrew, Hex, 3/8"-16 x 5/8" lg. |
| R | 720002 | Lock Washer, 3/8" |
| S | 158614 | Mower Housing |
| T | 705004 | Screw Hex. Cap, 3/8"-16 x 3/4" lg. |
| U | 106771 | Stud |
| V | 170163 | Belt Guide |
| W | 720002 | Lock Washer, 3/8" |
| X | 717003 | Nut, Hex, Full, 3/8"-16 |
| Y | 717510 | Nut, Hex, Full, Lock, 3/8"-16 |
| Z | 705010 | Capscrew, Hex, 3/8"-16 x 1-3/4" lg. |
| AA | 106717 | Belt Guide |
| AB | 719002 | Washer, Plain, 5/16" |
| AC | 106716 | Idler Pulley |
| AD | 154177 | Spacer |
| AE | 719001 | Washer, Plain, 3/8" |
| AF | 108514 | "V" Drive Belt |
| AG | 108372 | Stud |
| AH | 170203 | Housing Cover |
| AJ | 108531 | Baffle |
| AK | 715067 | Screw, Self Tapping, Hex. Hd., 1/4"-20 x 3/8" lg. |
| AL | 108504 | Deflector |
| AM | 703004 | Carriage Bolt, 3/8"-16 x 3/4" lg. |
| AN | 8161199 | Washer, Special |
| AP | 720002 | Lock Washer, 3/8" |
| AQ | 717003 | Nut, Hex, Full |
| AR | 703005 | Carriage Bolt, 5/16"-18 x 3/4" lg. |
| AT | 719002 | Washer, Plain, 5/16" |
| AU | 720001 | Lock Washer, 5/16" |
| AV | 717001 | Nut, Hex, Full 5/16" |
| AW | 103031 | Decal, Safety |
| AX | 108507 | Film, Safety |
| AY | 155061 | Decal, Simplicity |
| * | 103100 | Plate Serial No. |
| * | 121195 | Plate, Patent No. |
| AZ | 108822 | Arbor Assembly with Bearings and Hardware |
| * | 108828 | Decal-Safety Stds. |

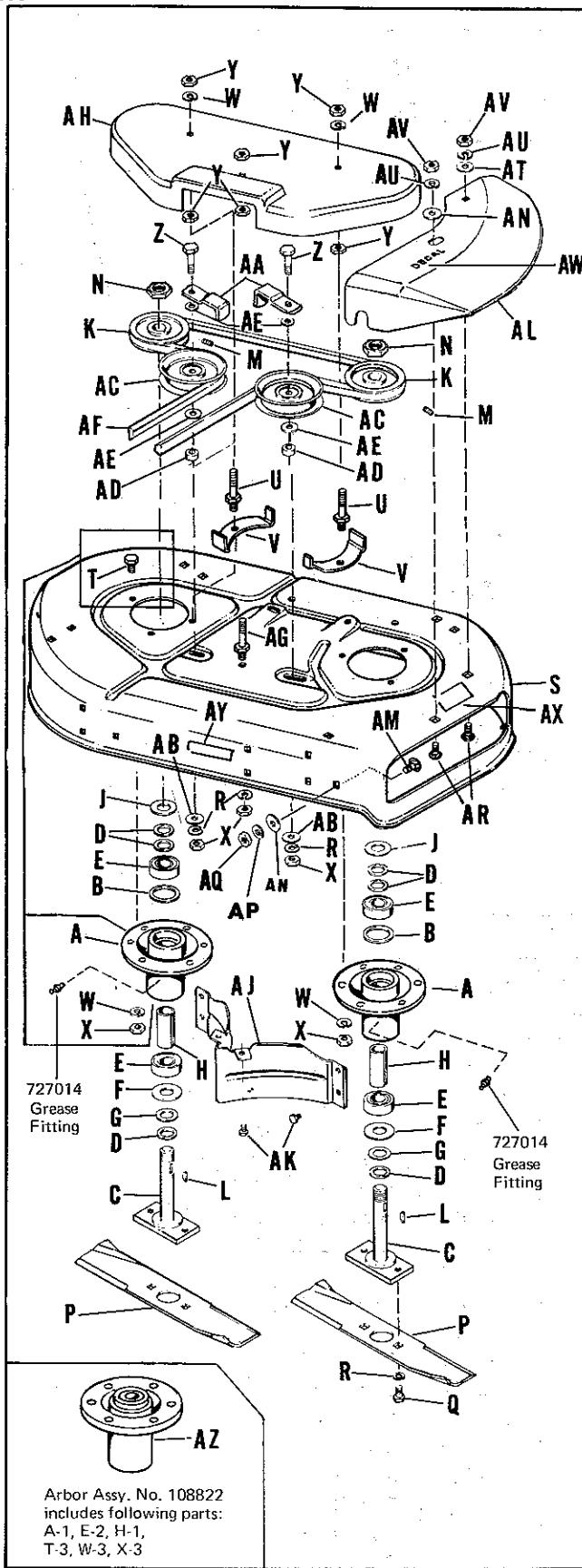
* Not Illustrated

CAUTION

MOWER SHALL NOT BE USED WITHOUT EITHER VACUUM COLLECTOR ADAPTER OR THE THE DEFLECTOR ADAPTER IN PLACE.

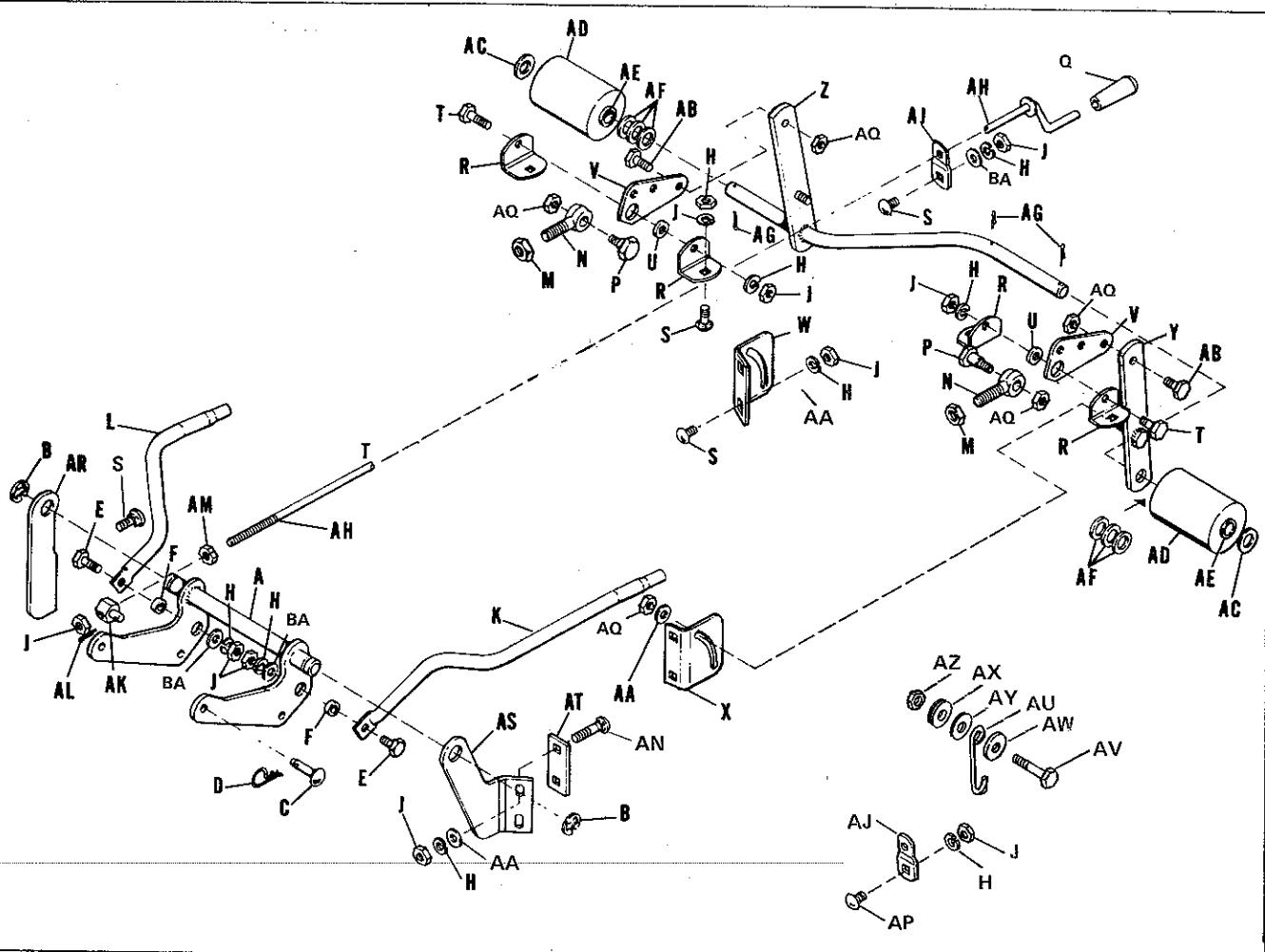
IMPORTANT

USE ONLY SIMPLICITY REPLACEMENT BELTS AND BLADES



Arbor Assy. No. 108822
includes following parts:
A-1, E-2, H-1,
T-3, W-3, X-3

MOWER LIFT & HITCH



| Ref. Let. | Part No. | Description |
|-----------|----------|-----------------------------------|
| A | 108552 | Mower Hitch Assembly |
| B | 157286 | Retaining Ring |
| C | 156306 | Pin |
| D | 8161045 | Spring Clip |
| E | 705005 | Capscrew, Hex, 3/8"-16 x 1" lg. |
| F | 121349 | Spacer |
| G | 8161045 | Spring Clip |
| H | 720002 | Lock Washer, 3/8" |
| J | 717003 | Nut, Hex, Full, 3/8"-16 |
| K | 108520 | Left Hand Adj. Arm |
| L | 108521 | Right Hand Adj. Arm |
| M | 717016 | Nut, Hex, Jam, 1/2"-20 |
| N | 157215 | Eye Bolt |
| P | 108412 | Shoulder Bolt |
| Q | 108547 | End Cap |
| R | 108513 | Pivot Bracket |
| S | 703004 | Carriage Bolt, 3/8"-16 x 3/4" lg. |
| T | 715005 | Capscrew, Hex, 3/8"-16 x 1" lg. |
| U | 108511 | Spacer |
| V | 108161 | Rear Lever |
| W | 108517 | Right Hand Roller Bracket |
| X | 108516 | Left Hand Roller Bracket |
| Y | 108256 | Roller Bar Assembly |
| Z | 108528 | Roller Bar & Shaft Assembly |
| AA | 719002 | Washer, Plain, 5/16" |

| Ref. Let. | Part No. | Description |
|-----------|----------|-----------------------------------|
| AB | 705031 | Capscrew, Hex, 3/8"-16 x 7/8" lg. |
| AC | 116001 | Washer |
| AD | 108431 | Roller Assembly |
| AE | 108419 | Bushing (Two per roller) |
| AF | 8261055 | Washer |
| AG | 722011 | Cotter Pin |
| AH | 108526 | Adj. Screw Assembly |
| AJ | 108510 | Screw Adj. Bracket |
| AK | 108512 | Pivot |
| AL | 722001 | Cotter Pin |
| AM | 717013 | Nut, Hex, Jam, 3/8"-16 |
| AN | 702004 | Carriage Bolt, 3/8"-16 x 1 1/4" |
| AP | 702003 | Carriage Bolt, 3/8"-16 x 3/4" |
| AQ | 717510 | Hex Nut, Full Lock, 3/8"-16 lg. |
| AR | 108519 | Front Bracket, R.H. |
| AS | 108518 | Front Bracket, L.H. |
| AT | 108509 | Spacer Bar |
| AU | 108551 | Mower Lift |
| AV | 705016 | Hex Capscrew, 3/8"-16 x 1 1/4" |
| AW | 719001 | Plain Washer, 3/8" |
| AX | 721701 | Washer, Double Coil Spring, 3/8" |
| AY | 159134 | Plain Washer |
| AZ | 717510 | Hex Nut Full Lock, 3/8"-16 |
| BA | 719001 | Plain Washer, 3/8" |

